

CHEMICAL FEED POINT LEGEND:

- 1 RAW WATER AT RAW WATER PUMP STATION
- 2A RAW WATER AT CLARIFICATION TRAIN NO. 1 IN-LINE MIXER
- 2B RAW WATER AT CLARIFICATION TRAIN NO. 2 IN-LINE MIXER
- 3 SETTLED WATER
- 4 FILTERED WATER
- 5 FINISHED WATER IN FLOW METER CHAMBER
- 6 MEMBRANE CLEAN IN PLACE SKID [NOT SHOWN ON PROCESS FLOW SCHEMATIC]
- 7 BACKPULSE TANK [NOT SHOWN ON PROCESS FLOW SCHEMATIC]
- 8 CHLORINE DIOXIDE GENERATOR [NOT SHOWN ON PROCESS FLOW SCHEMATIC]

Fully Sprinklered

Additions:	Date:
Revisions:	

DCS Infrastructure, LLC

3249 route 112, building 4 suite 1B
Medford, N.Y. 11763

631-320-1706

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR
APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL
ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 21333, EXPIRATION DATE: 09/05/16



Approved:

Approved: Chief, Facilities and Engineering:
Approved: Associate Chief for Maintenance And Operations, Perry Point:
Approved: Engineering Projects Supervisor
Approved: Infection Control Officer

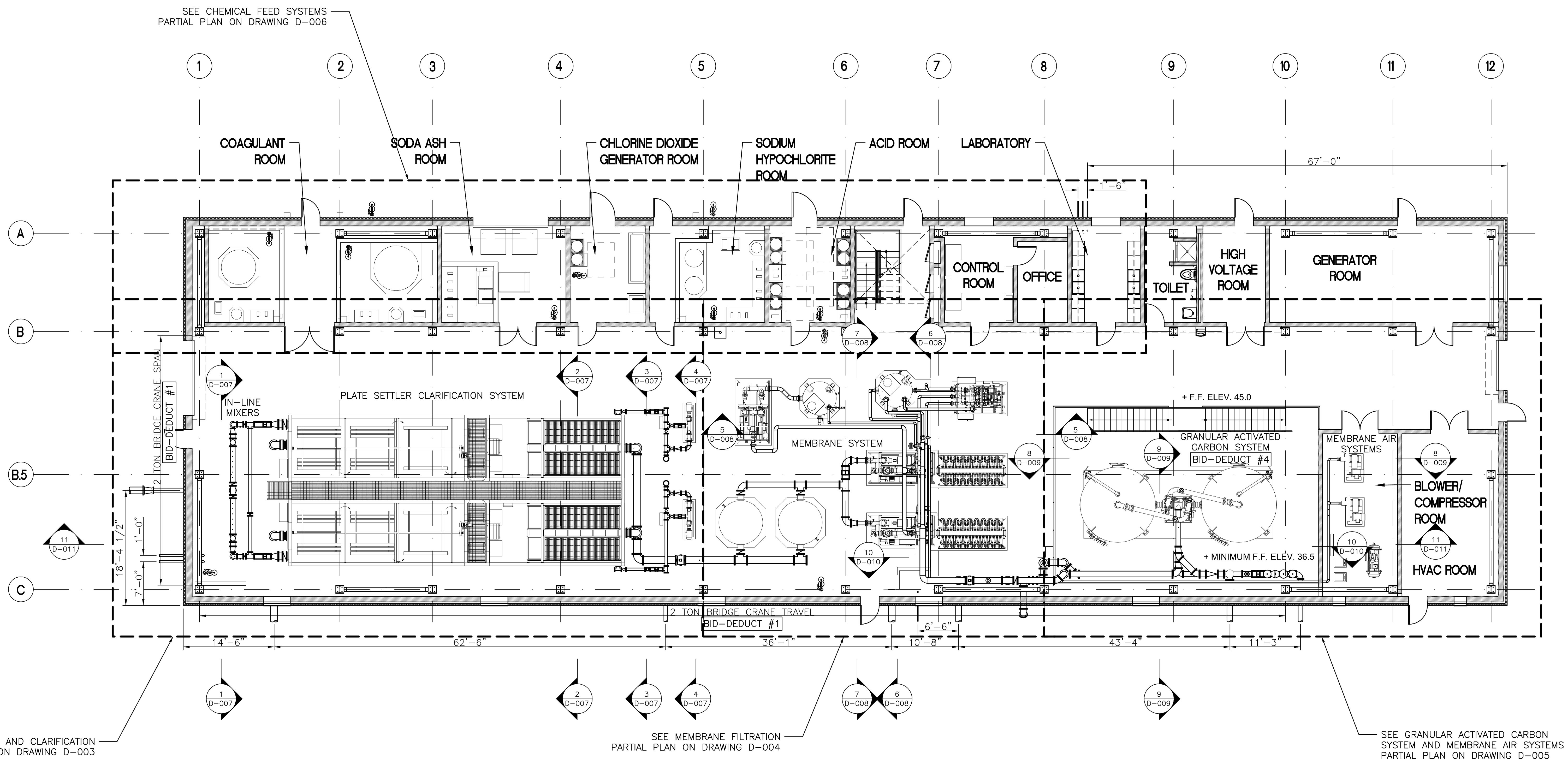
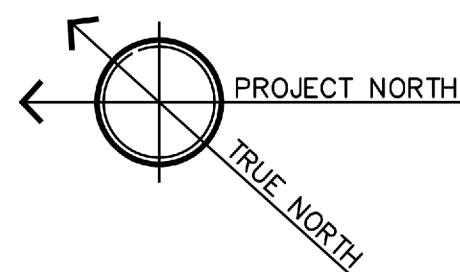
Drawing Title:
PROCESS FLOW SCHEMATIC
Approved: Associate Director for Operations:
Approved: Director, Medical Center:

Project Title:
POTABLE WATER SYSTEM IMPROVEMENTS - TIER 1 PERRY POINT MD VAMC
Scale:
NONE
Building No:
103
Checked:
JFC
Drawn:
IER
Location:
VAMC PERRY POINT, MD 21902

Date:
9/1/2015
Project No:
512A5-13-329
DRAWING NO:
D-001
111 OF 124



three inches = one foot
one and one half inch = one foot
one inch = one foot
three-quarters inch = one foot
one-half inch = one foot
three-eighths inch = one foot
one-quarter inch = one foot
one-eighth inch = one foot



1 FLOOR PLAN
D-002 SCALE: 1/8" = 1'-0"

PROCESS MECHANICAL DRAWING NOTES:

1. THESE PROCESS MECHANICAL DRAWING NOTES APPLY TO ALL PROCESS MECHANICAL DRAWINGS.
2. ALL DIMENSIONS ARE APPROXIMATE. CONTRACTOR SHALL COORDINATE ALL FINAL EQUIPMENT LOCATIONS IN THE FIELD.
3. THE CONTRACTOR SHALL PROVIDE PIPE AND EQUIPMENT SUPPORTS TO ADEQUATELY SUPPORT ALL PROCESS PIPING, EQUIPMENT, AND APPURTENANCES IN PROPER POSITION AND ALIGNMENT, AND TO PREVENT SWAY UNDER ALL OPERATING CONDITIONS AND SEISMIC LOADS. NOT ALL REQUIRED PIPE SUPPORTS HAVE BEEN SHOWN.
4. NOT ALL SMALL DIAMETER PIPING, VALVES, AND EQUIPMENT HAVE BEEN SHOWN ON THE PROCESS MECHANICAL PLANS IN ORDER TO PRESERVE CLARITY. REFER TO THE APPROPRIATE PROCESS INSTRUMENTATION DRAWINGS FOR REQUIRED EQUIPMENT.
5. ALL CHEMICAL FEED LINES SHALL HAVE DUAL CONTAINMENT WHEN OUTSIDE THE LIMITS OF CHEMICAL CONTAINMENT AREAS. CHEMICAL METERING PUMP SHELVES FOR CHEMICALS SUPPLIED IN DRUMS SHALL BE PROVIDED WITH CONTAINMENT TRAYS THAT ARE PIPED TO DRAIN TO THE ASSOCIATED CHEMICAL DRUM CONTAINMENT PALLET.
6. ALL INTERIOR DUCTILE IRON PIPING SHALL BE PAINTED PRIOR TO PLACING THE FACILITY INTO SERVICE.
7. CONTRACTOR SHALL FURNISH AND INSTALL PIPE COUPLINGS AS NECESSARY TO FACILITATE INSTALLATION AND MAINTENANCE OF TREATMENT EQUIPMENT AND PROTECT AGAINST THE EFFECTS OF THERMAL EXPANSION. NOT ALL REQUIRED COUPLINGS AND EXPANSION JOINTS ARE SHOWN.
8. ALL BELOW SLAB PROCESS PIPING SHALL BE ENCASED IN CONCRETE. REFER TO DRAWING S-017 FOR DETAILS.
9. SLAB SLEEVES SHALL BE INSTALLED AT ALL PROCESS PIPING FLOOR SLAB PENETRATIONS. REFER TO DRAWING D-014 FOR DETAIL.
10. REFER TO PROCESS INSTRUMENTATION DRAWINGS AND SPECIFICATIONS FOR PIPING MATERIALS OF CONSTRUCTION.

Fully Sprinklered

Additions:	Date:
Revisions:	

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3249 route 112, building 4 suite 1B
Medford, N.Y. 11763 631-320-1706

Hatch Mott MacDonald

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LICENSE NO. 21333, EXPIRATION DATE: 09/05/16

Seal of the State of Maryland

Approved:

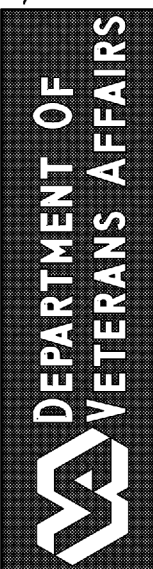
Approved: Chief, Facilities and Engineering:
Approved: Associate Chief for Maintenance And Operations, Perry Point:
Approved: Engineering Projects Supervisor
Approved: Infection Control Officer

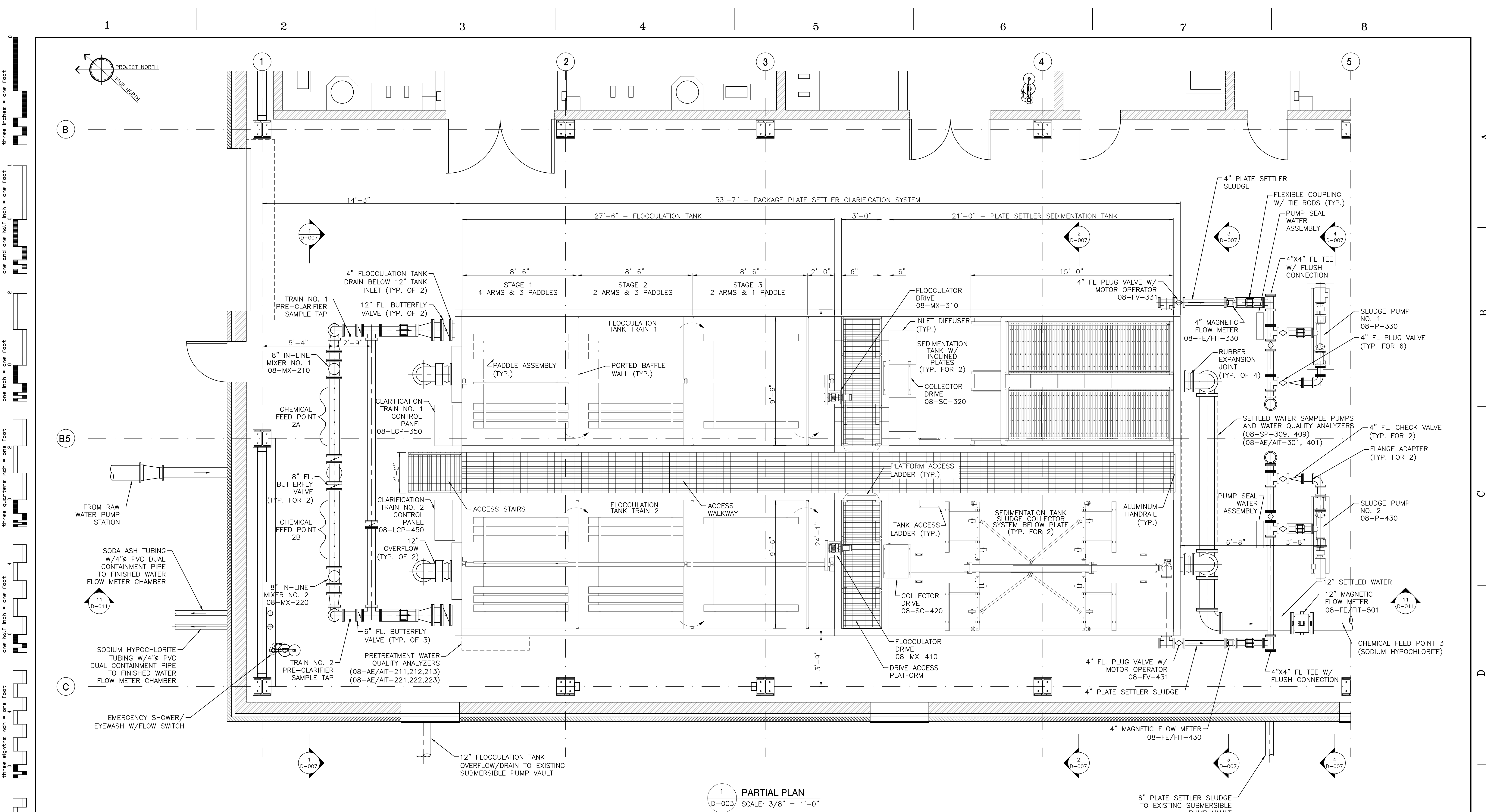
Drawing Title:
OVERALL BUILDING FLOOR PLAN
Approved: Associate Director for Operations:
Approved: Director, Medical Center:

Project Title:
POTABLE WATER SYSTEM IMPROVEMENTS - TIER 1 PERRY POINT MD VAMC
Scale:
1/8" = 1'-0"
Building No:
103
Checked:
JFC
Drawn:
IER
Location:
VAMC PERRY POINT, MD 21902

Date:
9/1/2015
Project No:
512A5-13-329
DRAWING NO:
D-002
112 OF 124

100% Bid Documents, September 1, 2015





1 PARTIAL PLAN
D-003 SCALE: 3/8" = 1'-0"

NOTES:
1. SAMPLE PUMPS 08-SP-309 AND 08-SP-409 SHALL BE 1/3 HP, 115V/1PH/60HZ MODEL 4HEY3 SHALLOW WELL JET PUMPS AS MANUFACTURED BY DAYTON, OR APPROVED EQUAL.

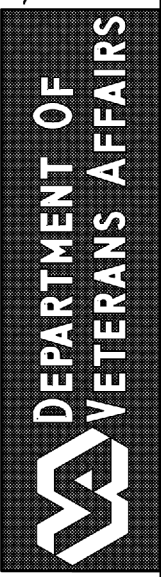
Fully Sprinklered	
Additions:	Date:
Revisions:	

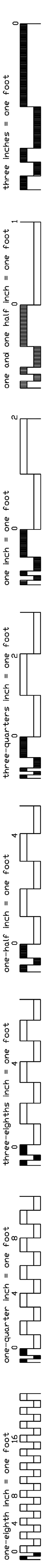
DCS Infrastructure, LLC
3249 route 112, building 4 suite 1B
Medford, N.Y. 11763
631-320-1706

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ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 21333, EXPIRATION DATE: 09/05/16

Approved:	Approved: Chief, Facilities and Engineering:
	Approved: Associate Chief for Maintenance And Operations, Perry Point:
	Approved: Engineering Projects Supervisor
	Approved: Infection Control Officer

Drawing Title: PARTIAL PLAN- FLASH MIXING AND CLARIFICATION		Project Title: POTABLE WATER SYSTEM IMPROVEMENTS - TIER 1		Date: 9/1/2015
Approved: Associate Director for Operations:		Building No.: 103		Project No.: 512A5-13-329
Approved: Director, Medical Center:		Scale: 3/8" = 1'-0"	Checked: JFC	DRAWING NO.: D-003
		Location: VAMC PERRY POINT, MD 21902	Drawn: IER	113 OF 124

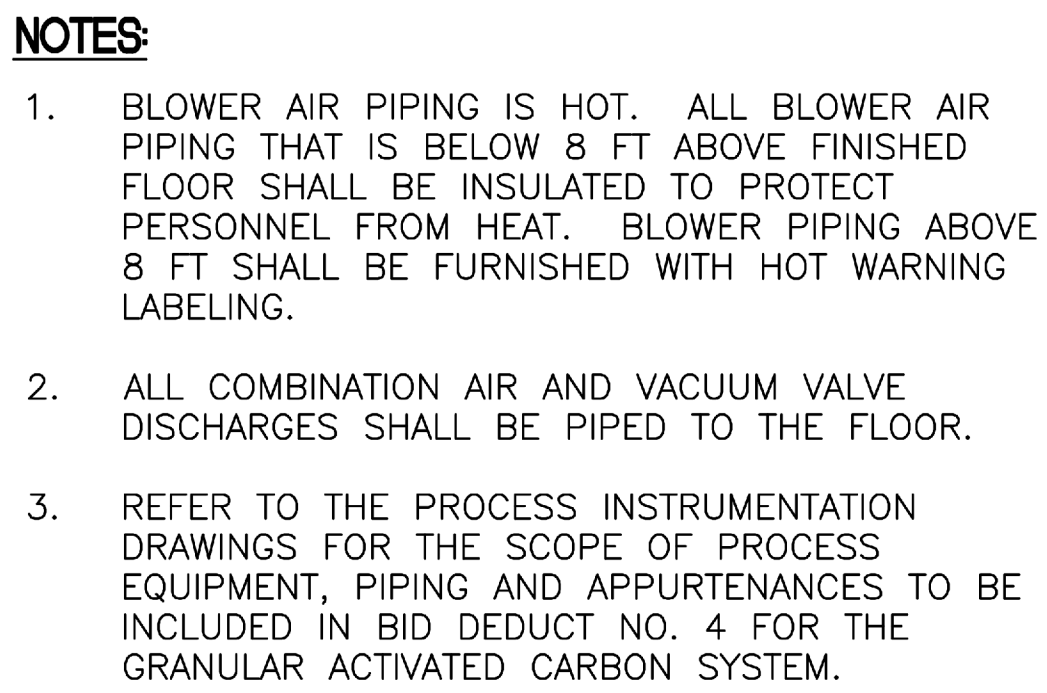




1. FOR MEMBRANE SYSTEM SUPPLIER SCOPE OF SUPPLY, REFER TO PROCESS INSTRUMENTATION DRAWINGS.
2. FOR SKID MOUNTED EQUIPMENT DETAILS, REFER TO PROCESS INSTRUMENTATION DRAWINGS.
3. SAMPLE PUMPS 47-SP-009 AND 47-SP-019 SHALL BE 1/3 HP, 115V/1PH/60HZ MODEL 4HEY3 SHALLOW WELL JET PUMPS AS MANUFACTURED BY DAYTON, OR APPROVED EQUAL.
4. BLOWER AIR PIPING IS HOT. ALL BLOWER AIR PIPING THAT IS BELOW 8 FT ABOVE FINISHED FLOOR SHALL BE INSULATED TO PROTECT PERSONNEL FROM HEAT. BLOWER PIPING ABOVE 8 FT SHALL BE FURNISHED WITH HOT WARNING LABELING.
5. COMBINATION AIR AND VACUUM VALVE DISCHARGES SHALL BE PIPED TO THE FLOOR.



DEPARTMENT OF
VETERANS AFFAIRS



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ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND,
LICENSE NO. 21333, EXPIRATION DATE: 09/05/16

Date:
9/1/2015

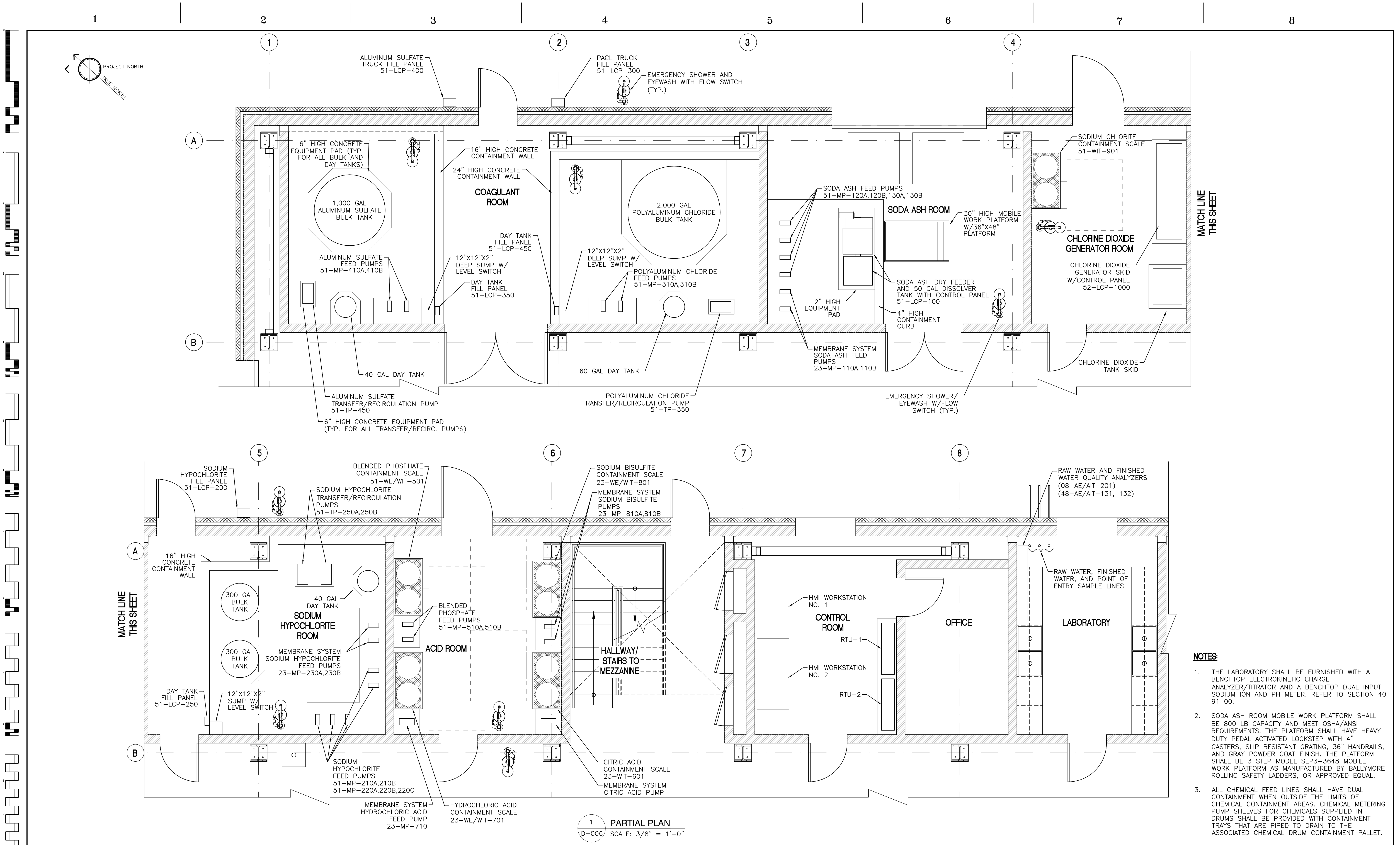
Project No:
512A5-13-329

DRAWING NO:
D-005

115 OF 124



DEPARTMENT OF
VETERANS AFFAIRS



- NOTES:**
1. THE LABORATORY SHALL BE FURNISHED WITH A BENCHTOP ELECTROKINETIC CHARGE ANALYZER/TITRATOR AND A BENCHTOP DUAL INPUT SODIUM ION AND PH METER. REFER TO SECTION 40 91 00.
 2. SODA ASH ROOM MOBILE WORK PLATFORM SHALL BE 800 LB CAPACITY AND MEET OSHA/ANSI REQUIREMENTS. THE PLATFORM SHALL HAVE HEAVY DUTY PEDAL ACTIVATED LOCKSTEP WITH 4" CASTERS, SLIP RESISTANT GRATING, 36" HANDRAILS, AND GRAY POWDER COAT FINISH. THE PLATFORM SHALL BE 3 STEP MODEL SEP3-3648 MOBILE WORK PLATFORM AS MANUFACTURED BY BALLYMORE ROLLING SAFETY LADDERS, OR APPROVED EQUAL.
 3. ALL CHEMICAL FEED LINES SHALL HAVE DUAL CONTAINMENT WHEN OUTSIDE THE LIMITS OF CHEMICAL CONTAINMENT AREAS. CHEMICAL METERING PUMP SHELVES FOR CHEMICALS SUPPLIED IN DRUMS SHALL BE PROVIDED WITH CONTAINMENT TRAYS THAT ARE PIPED TO DRAIN TO THE ASSOCIATED CHEMICAL DRUM CONTAINMENT PALLET.

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LICENSE NO. 21333, EXPIRATION DATE: 09/05/16



Fully Sprinklered	
Additions:	Date:
Revisions:	

DCS Infrastructure, LLC
3249 route 112, building 4 suite 1B
Medford, N.Y. 11763 631-320-1706

Hatch Mott MacDonald

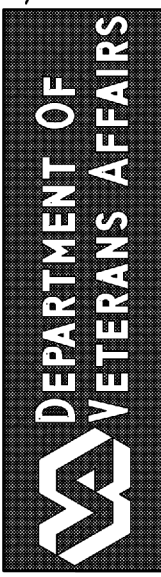
Approved:	Approved: Chief, Facilities and Engineering:
	Approved: Associate Chief for Maintenance And Operations, Perry Point:
	Approved: Engineering Projects Supervisor
	Approved: Infection Control Officer

Approved: Chief, Facilities and Engineering:
Approved: Associate Chief for Maintenance And Operations, Perry Point:
Approved: Engineering Projects Supervisor
Approved: Infection Control Officer

Drawing Title:
PARTIAL PLAN- CHEMICAL FEED SYSTEMS
Approved: Associate Director for Operations:
Approved: Director, Medical Center:

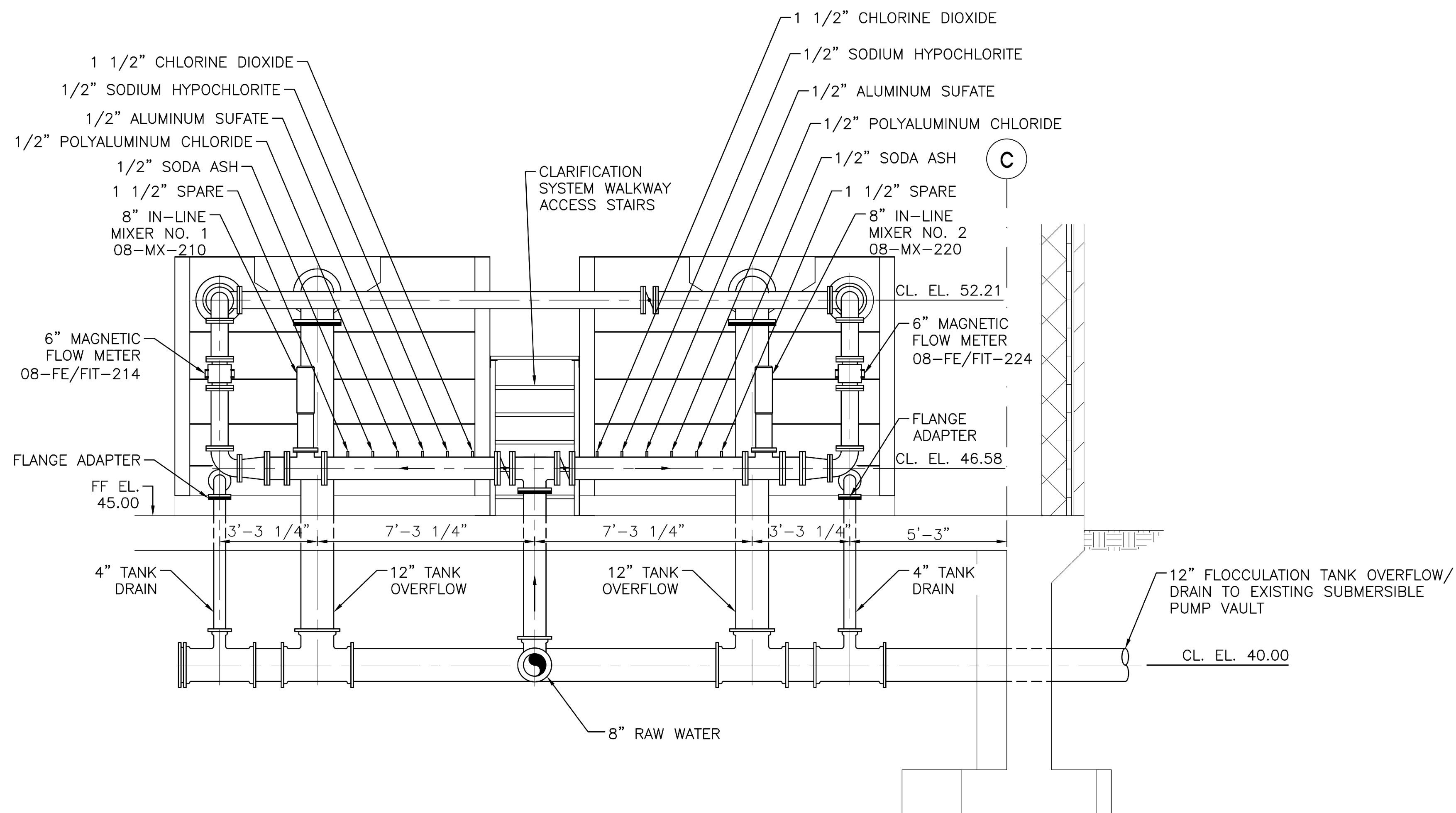
Project Title:
POTABLE WATER SYSTEM IMPROVEMENTS - TIER 1 PERRY POINT MD VAMC
Scale:
3/8" = 1'-0"
Building No:
103
Checked:
JFC
Drawn:
IER
Location:
VAMC PERRY POINT, MD 21902

Date:
9/1/2015
Project No:
512A5-13-329
DRAWING NO:
D-006
116 OF 124

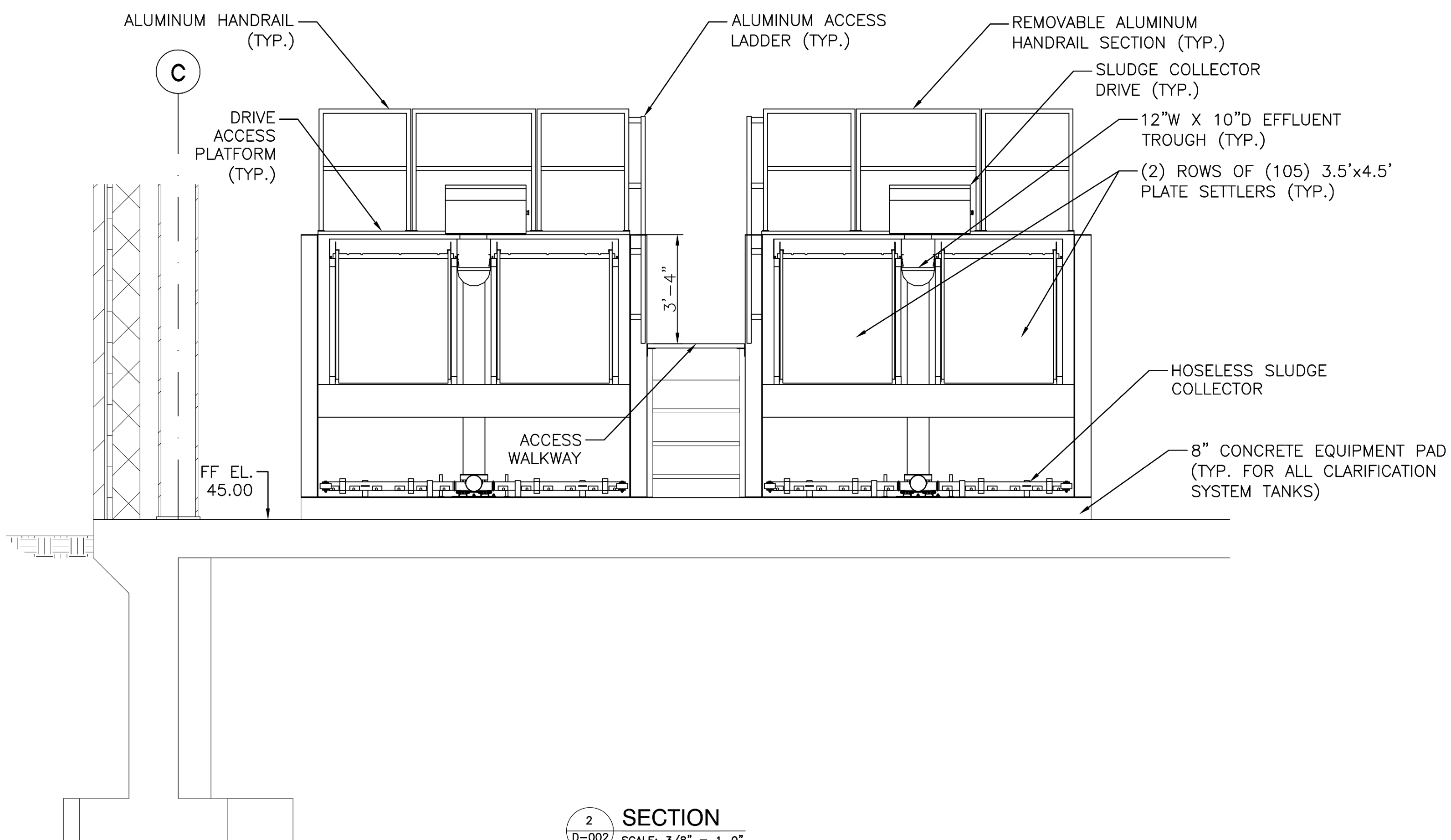


three inches = one foot
one and one half inch = one foot
one inch = one foot
three-quarters inch = one foot
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three-eighths inch = one foot
one-quarter inch = one foot
one-eighth inch = one foot

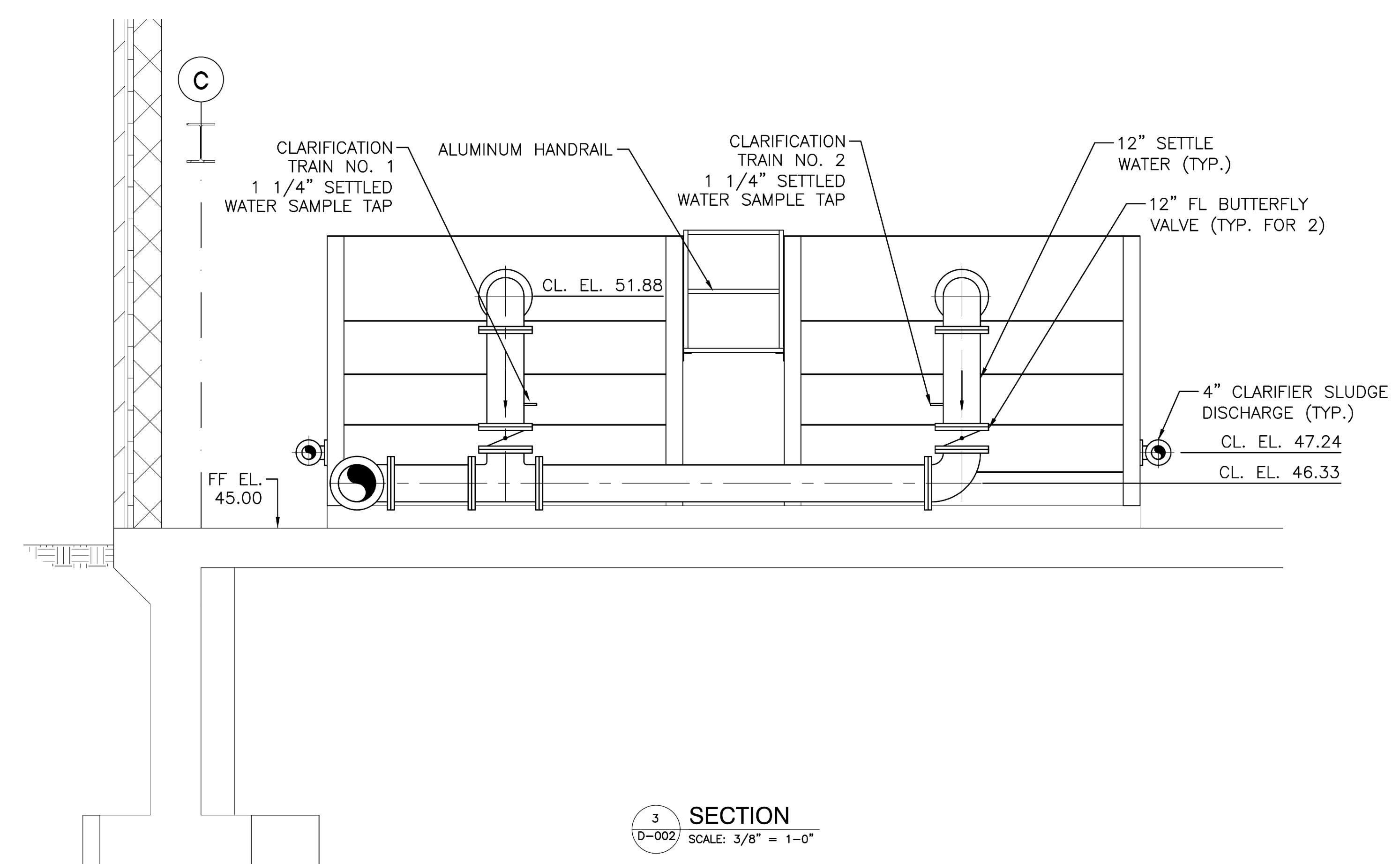
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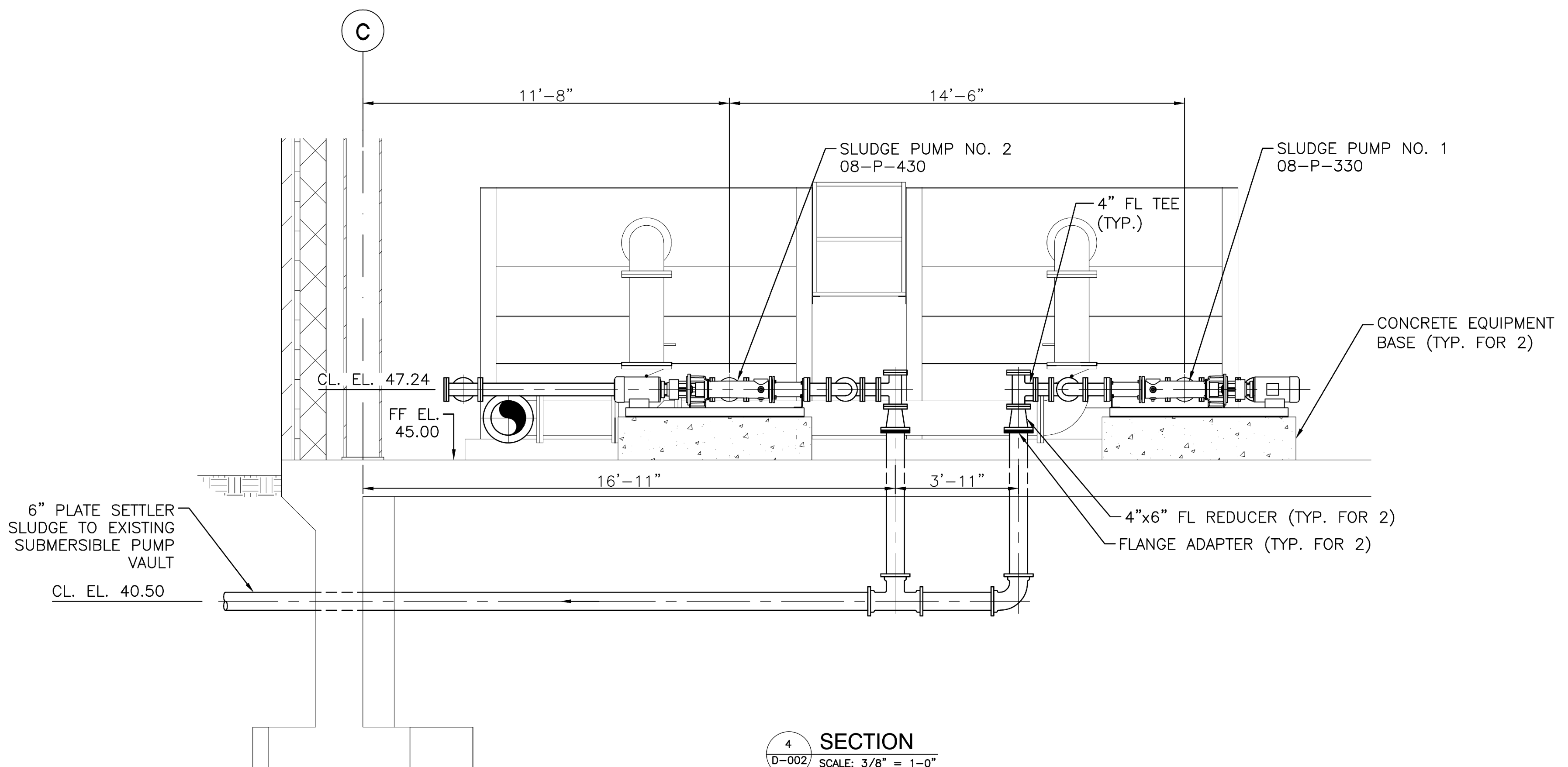
1 SECTION
D-002 SCALE: 3/8" = 1'-0"



2 SECTION
D-002 SCALE: 3/8" = 1'-0"



3 SECTION
D-002 SCALE: 3/8" = 1'-0"



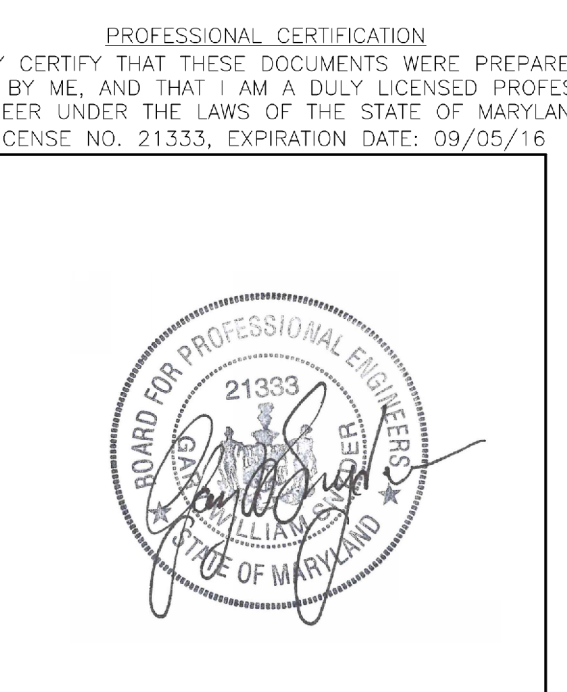
4 SECTION
D-002 SCALE: 3/8" = 1'-0"

NOTES:
1. CONTRACTOR SHALL COORDINATE FLOOR SLAB PIPE PENETRATIONS WITH APPROVED SHOP DRAWINGS OF CLARIFICATION EQUIPMENT.

Fully Sprinklered	
Additions:	Date:
Revisions:	

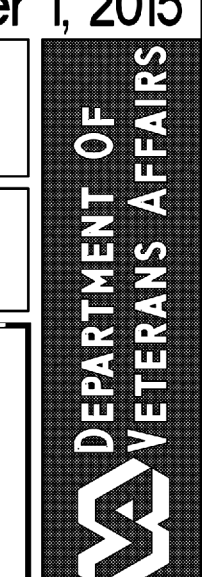
DCS Infrastructure, LLC
3249 route 112, building 4 suite 1B
Medford, N.Y. 11763 631-320-1706

Hatch Mott MacDonald

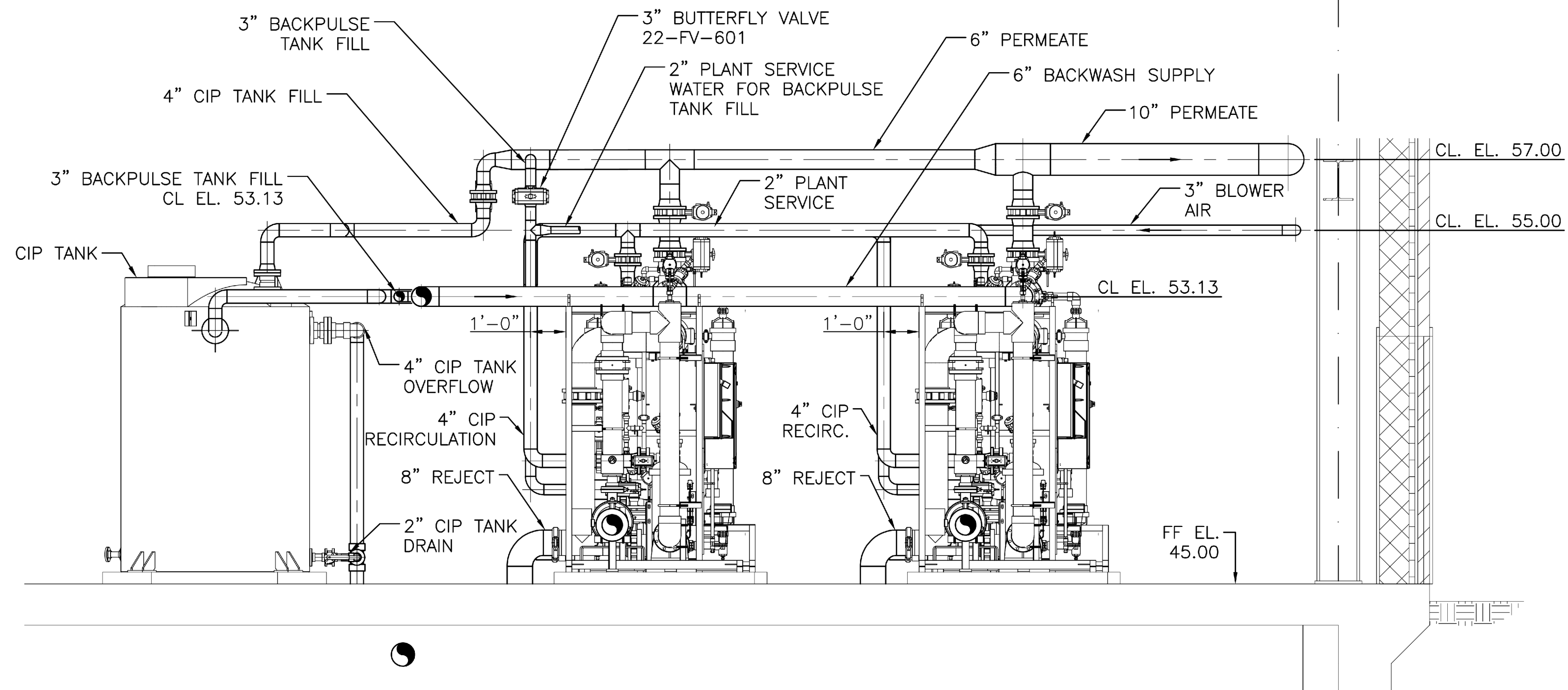
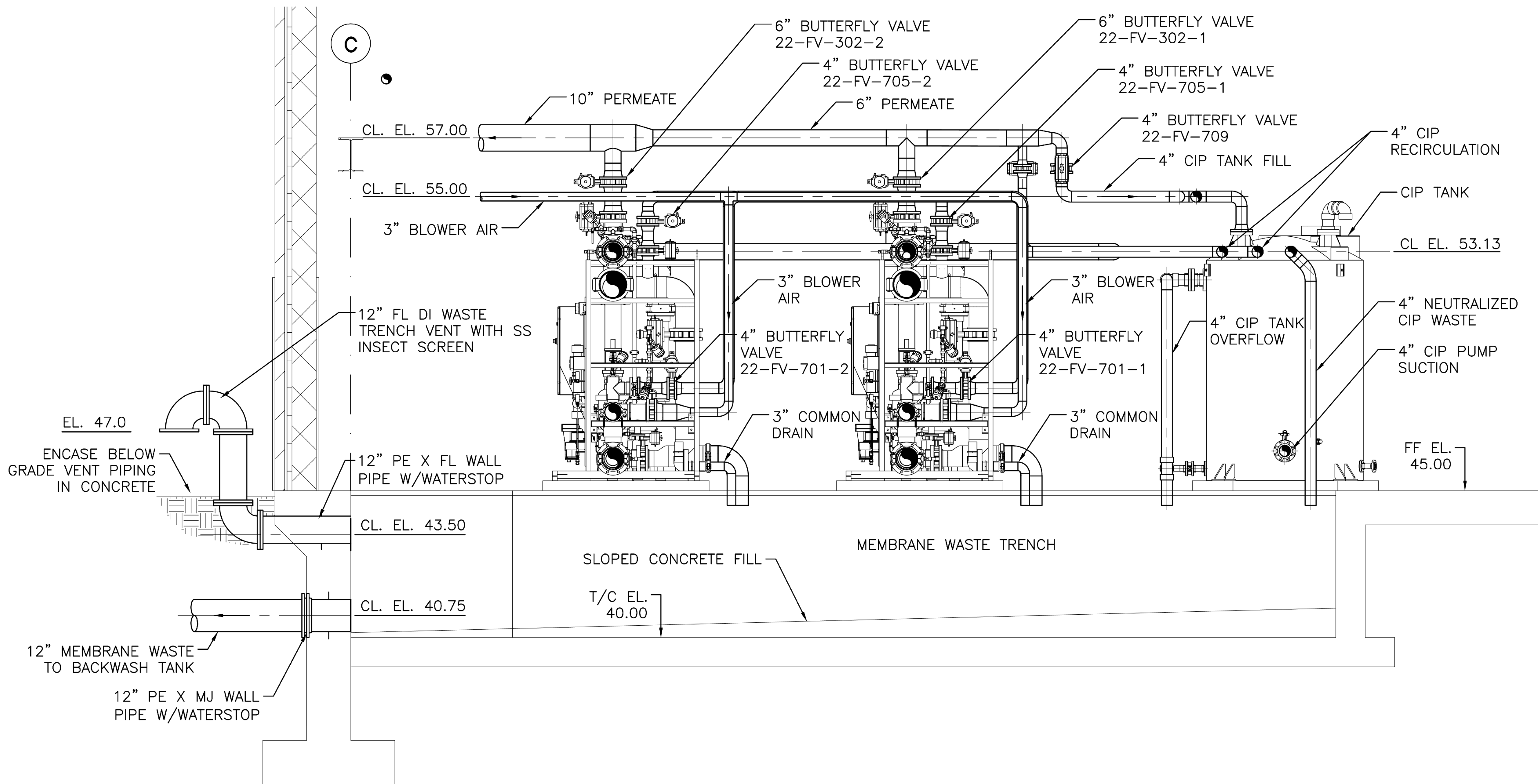
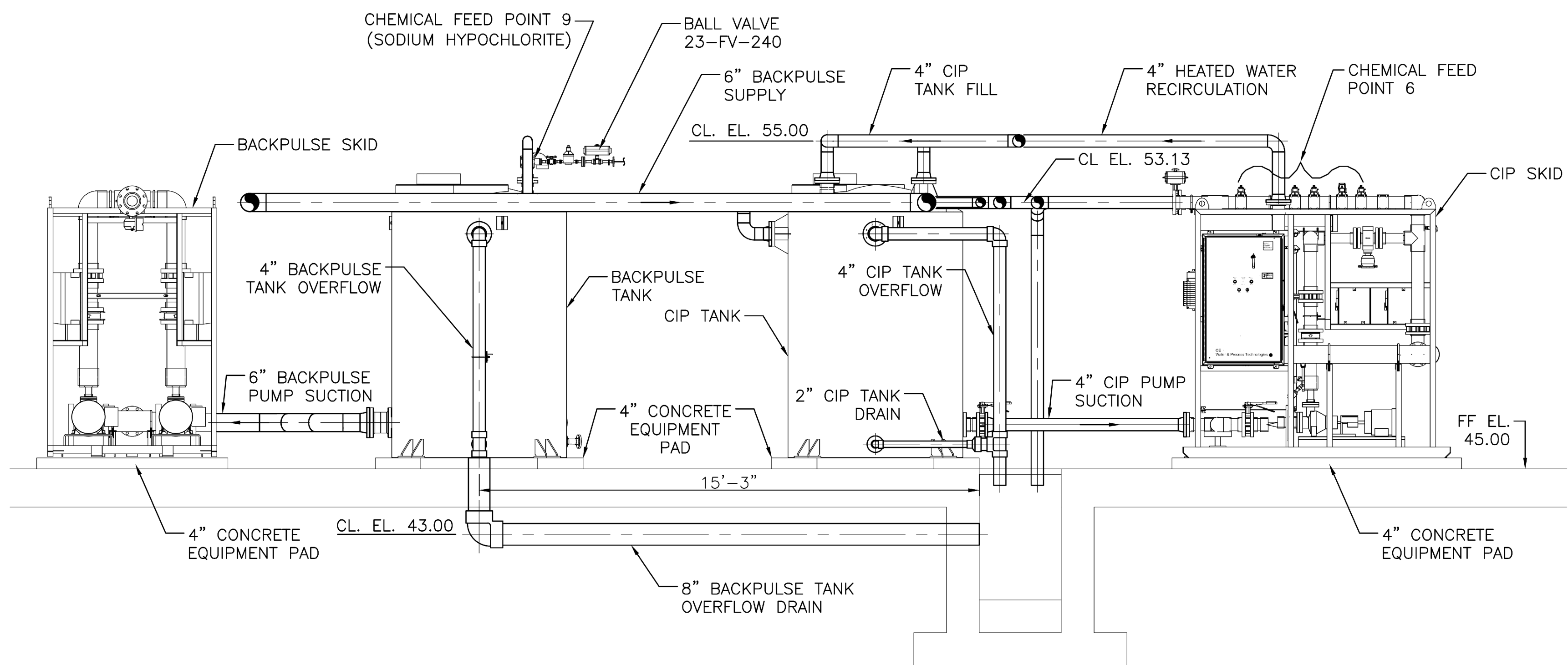


Approved:	Approved: Chief, Facilities and Engineering:
	Approved: Associate Chief for Maintenance And Operations, Perry Point:
	Approved: Engineering Projects Supervisor
	Approved: Infection Control Officer

Drawing Title: SECTIONS - SHEET 1 OF 5		Project Title: POTABLE WATER SYSTEM IMPROVEMENTS - TIER 1 PERRY POINT MD VAMC		Date: 9/1/2015
Approved: Associate Director for Operations:		Scale: 3/8" = 1'-0"	Building No: 103	Checked: JFC
Approved: Director, Medical Center:		Location: VAMC PERRY POINT, MD 21902	Drawn: IER	Project No: 512A5-13-329
				DRAWING NO: D-007
				117 OF 124



three inches = one foot
one and one half inch = one foot
one inch = one foot
three-quarters inch = one foot
one-half inch = one foot
three-eighths inch = one foot
one-quarter inch = one foot
one-eighth inch = one foot



Fully Sprinklered

Revisions:	Date:

DCS Infrastructure, LLC
3249 route 112, building 4 suite 1B
Medford, N.Y. 11763 631-320-1706

Hatch Mott MacDonald

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Approved: Chief, Facilities and Engineering:
Approved: Associate Chief for Maintenance And Operations, Perry Point:
Approved: Engineering Projects Supervisor
Approved: Infection Control Officer

Drawing Title:
SECTIONS - SHEET 2 OF 5
Approved: Associate Director for Operations:
Approved: Director, Medical Center:

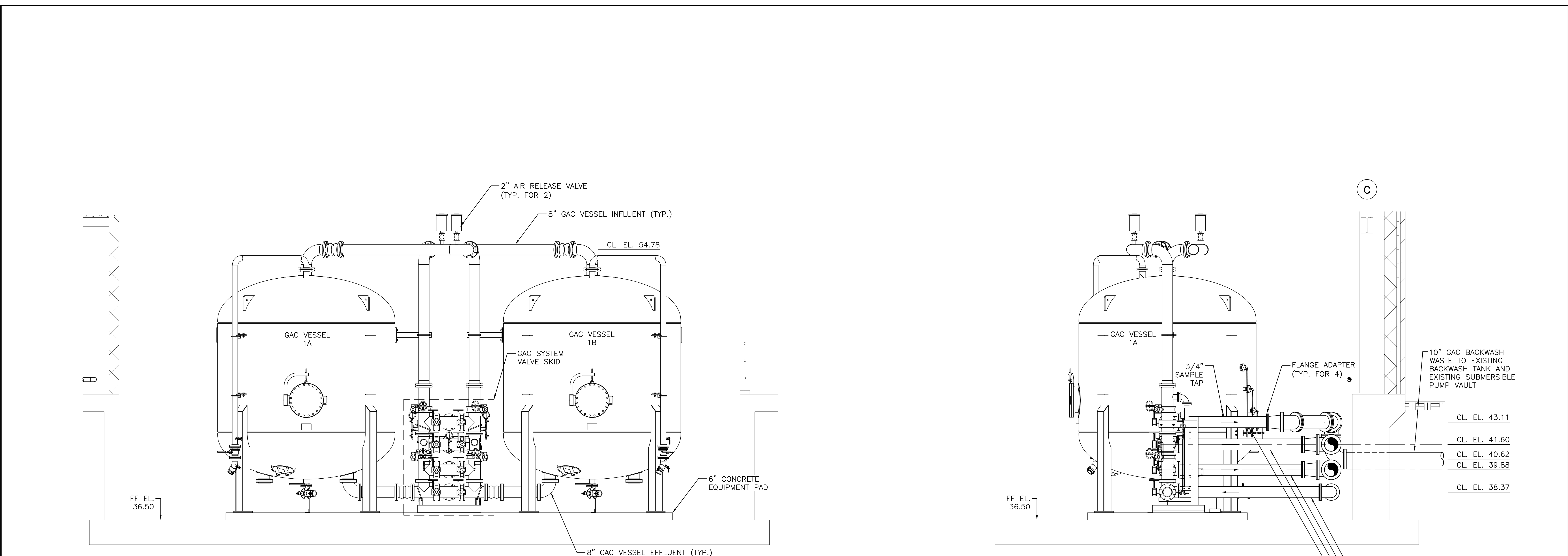
Project Title:
POTABLE WATER SYSTEM IMPROVEMENTS - TIER 1 PERRY POINT MD VAMC
Scale:
3/8" = 1'-0"
Building No:
103
Checked:
JFC
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Location:
VAMC PERRY POINT, MD 21902

Date:
9/1/2015
Project No:
512A5-13-329
DRAWING NO:
D-008
118 OF 124

100% Bid Documents, September 1, 2015



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three-quarters inch = one foot
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8 SECTION
D-002 SCALE: 3/8" = 1'-0"

9 SECTION
D-002 SCALE: 3/8" = 1'-0"

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Additions:	Date:
Revisions:	

DCS Infrastructure, LLC

3249 route 112, building 4 suite 1B
Medford, N.Y. 11763

631-320-1706

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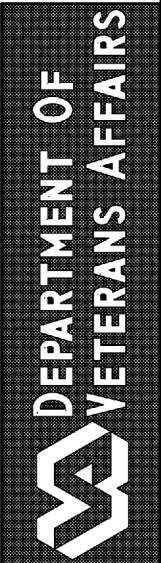
Approved:

Approved: Chief, Facilities and Engineering:
Approved: Associate Chief for Maintenance And Operations, Perry Point:
Approved: Engineering Projects Supervisor
Approved: Infection Control Officer

Drawing Title:
SECTIONS - SHEET 3 OF 5
Approved: Associate Director for Operations:
Approved: Director, Medical Center:

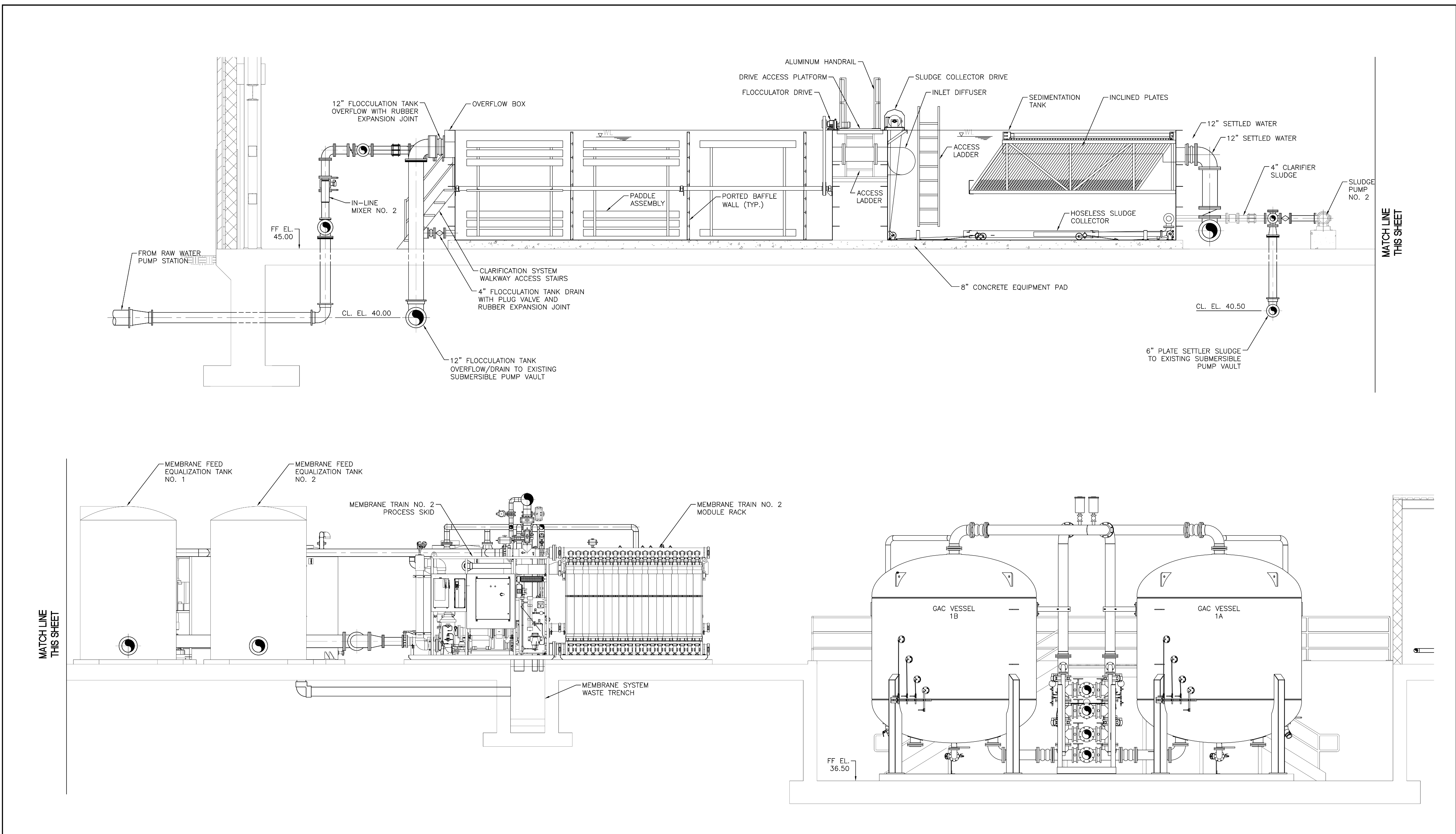
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POTABLE WATER SYSTEM IMPROVEMENTS - TIER 1 PERRY POINT MD VAMC			
Scale:	Building No:	Checked:	Drawn:
3/8" = 1'-0"	103	JFC	IER
Location:			
VAMC PERRY POINT, MD 21902			

Date:
9/1/2015
Project No:
512A5-13-329
DRAWING NO:
D-009
119 OF 124





three inches = one foot
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one inch = one foot
three-quarters inch = one foot
one-half inch = one foot
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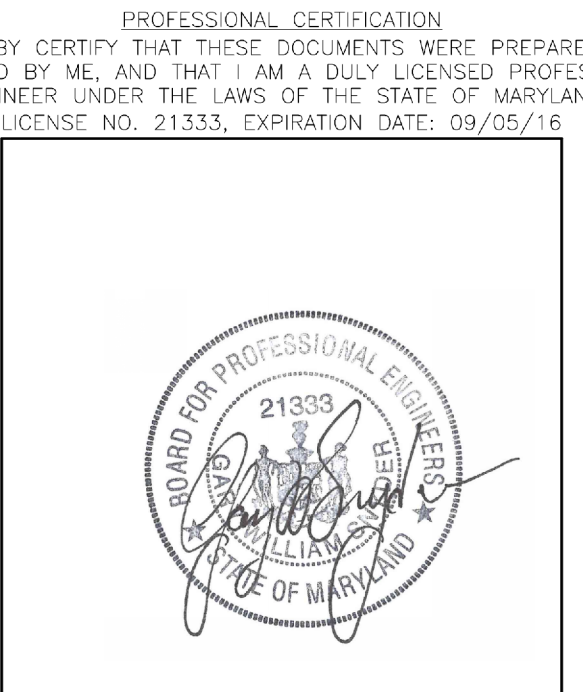
11 PARTIAL SECTION
D-002 SCALE: 3/8" = 1'-0"

Fully Sprinklered	
Additions:	Date:
Revisions:	

DCS Infrastructure, LLC

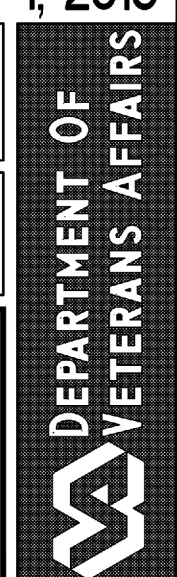
3249 route 112, building 4 suite 1B
Medford, N.Y. 11763

631-320-1706

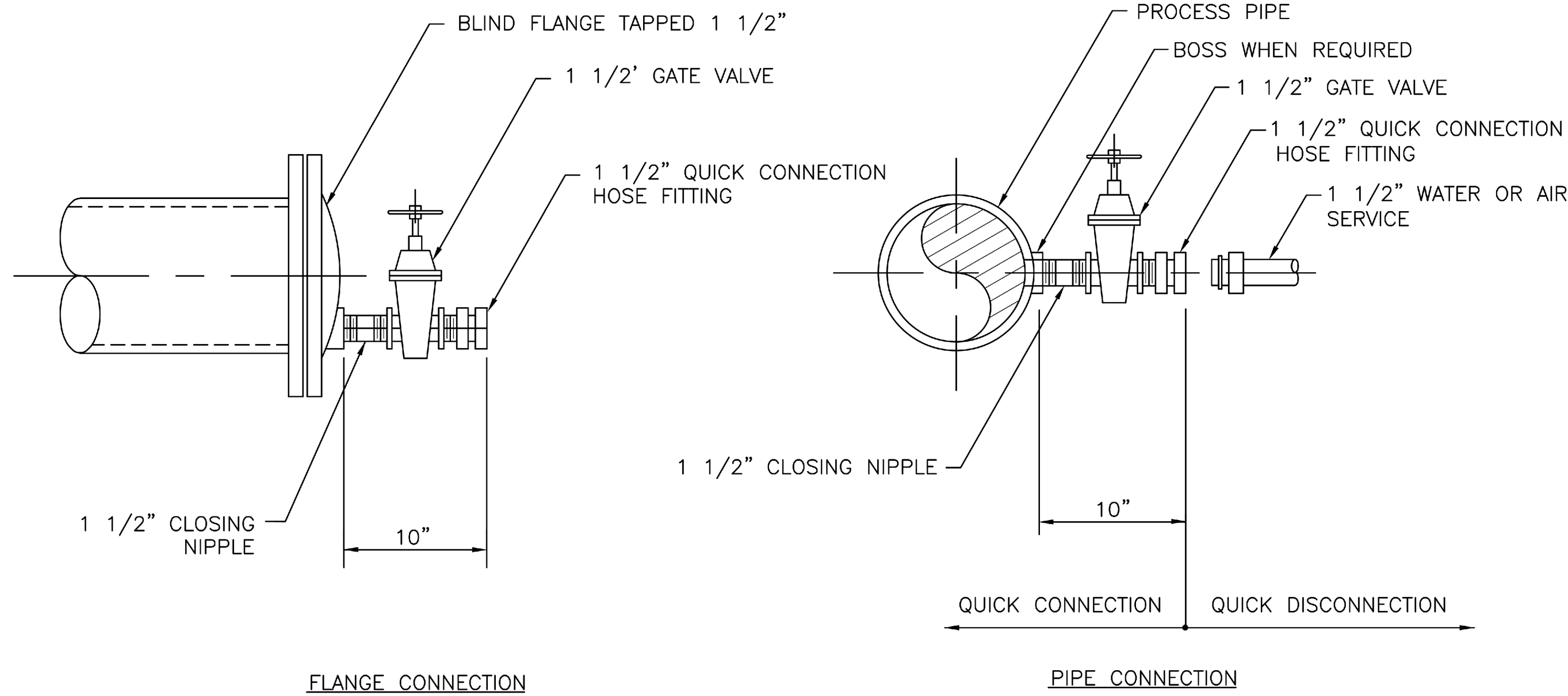


Approved:	Approved: Chief, Facilities and Engineering:
	Approved: Associate Chief for Maintenance And Operations, Perry Point:
	Approved: Engineering Projects Supervisor
	Approved: Infection Control Officer

Drawing Title: SECTIONS - SHEET 5 OF 5		Project Title: POTABLE WATER SYSTEM IMPROVEMENTS - TIER 1 PERRY POINT MD VAMC		Date: 9/1/2015
Approved: Associate Director for Operations:		Scale: 3/8" = 1'-0"	Building No: 103	Checked: JFC
Approved: Director, Medical Center:		Location: VAMC PERRY POINT, MD 21902	Drawn: IER	Project No: 512A5-13-329
				DRAWING NO: D-011
				121 OF 124



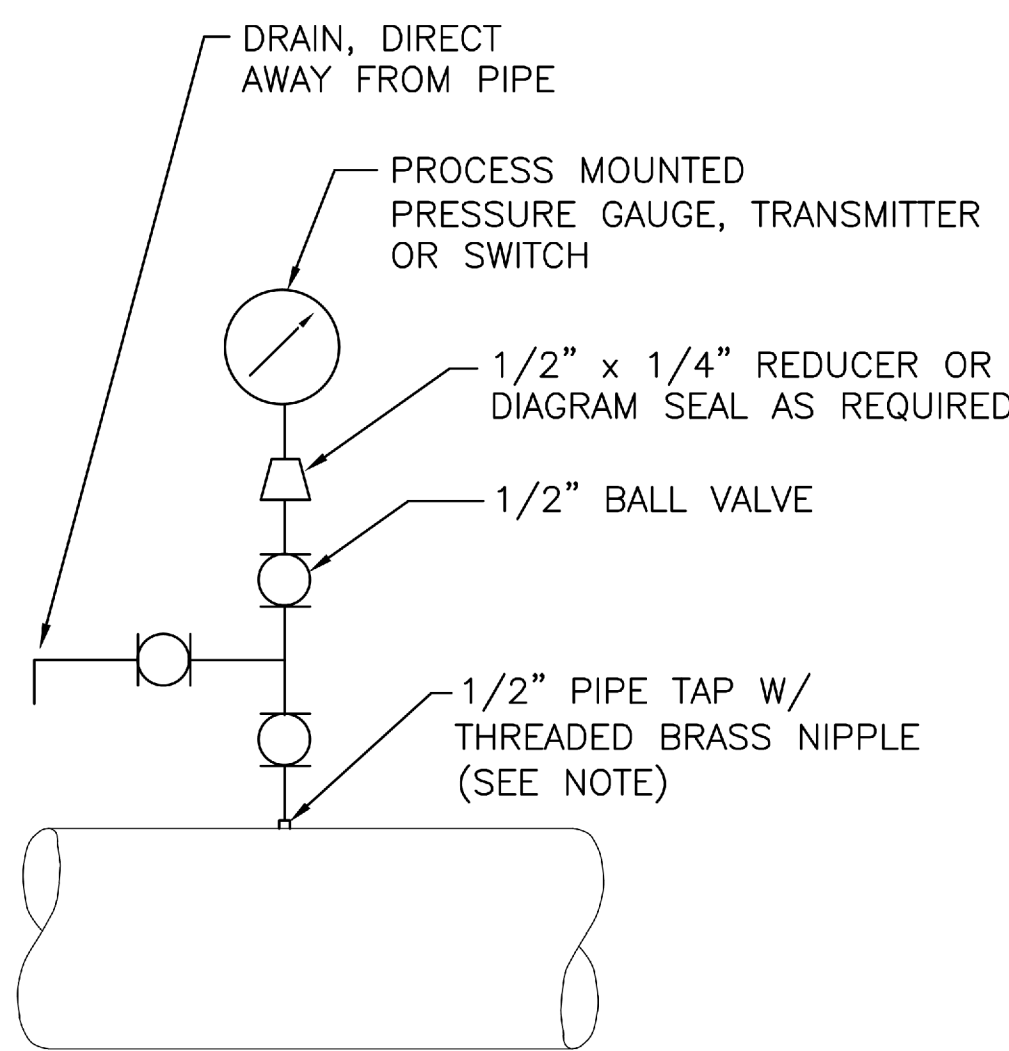
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one-eighth inch = one foot



FLANGE CONNECTION

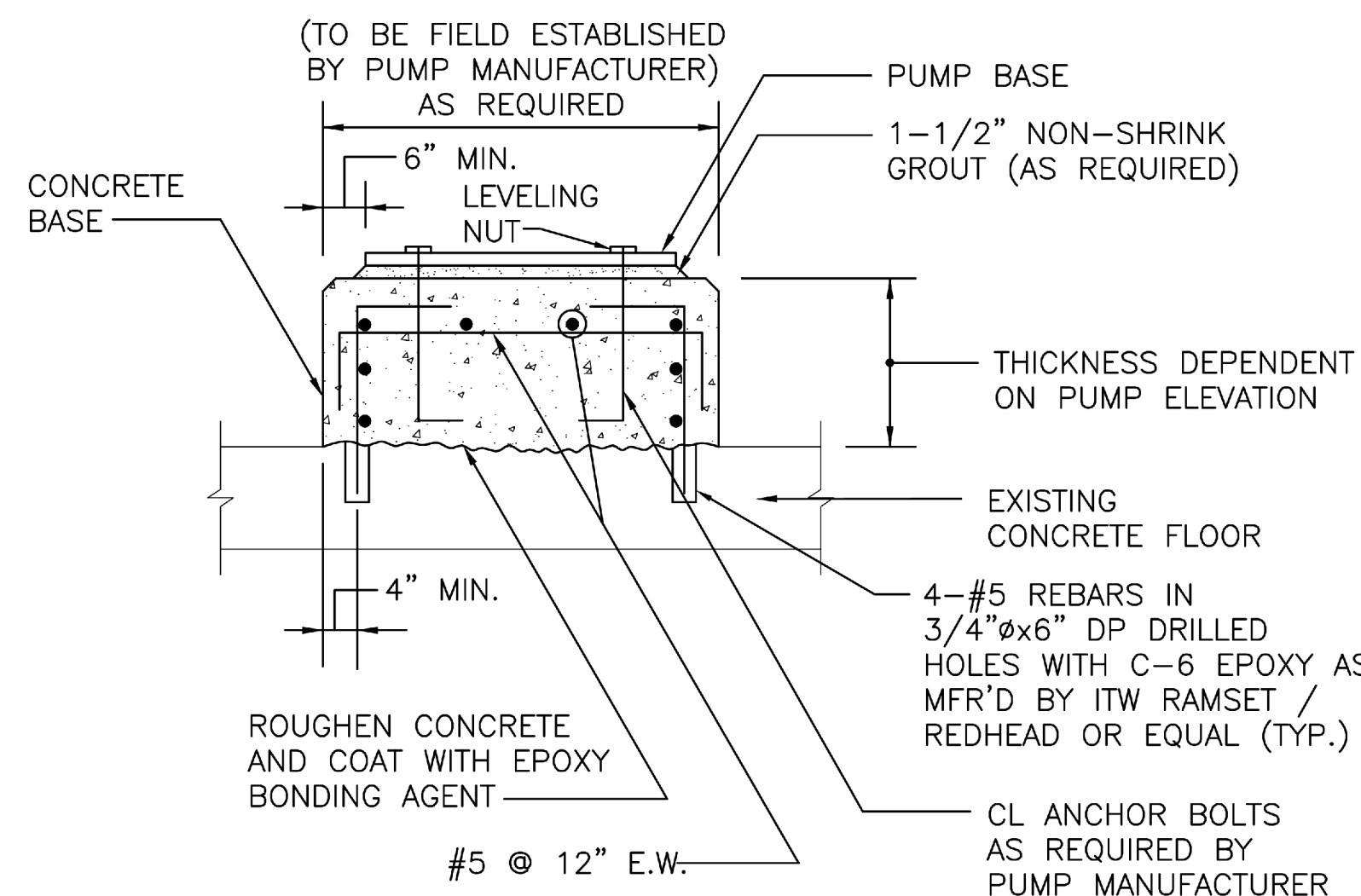
PIPE CONNECTION

PIPE FLUSHING CONNECTIONS
NOT TO SCALE

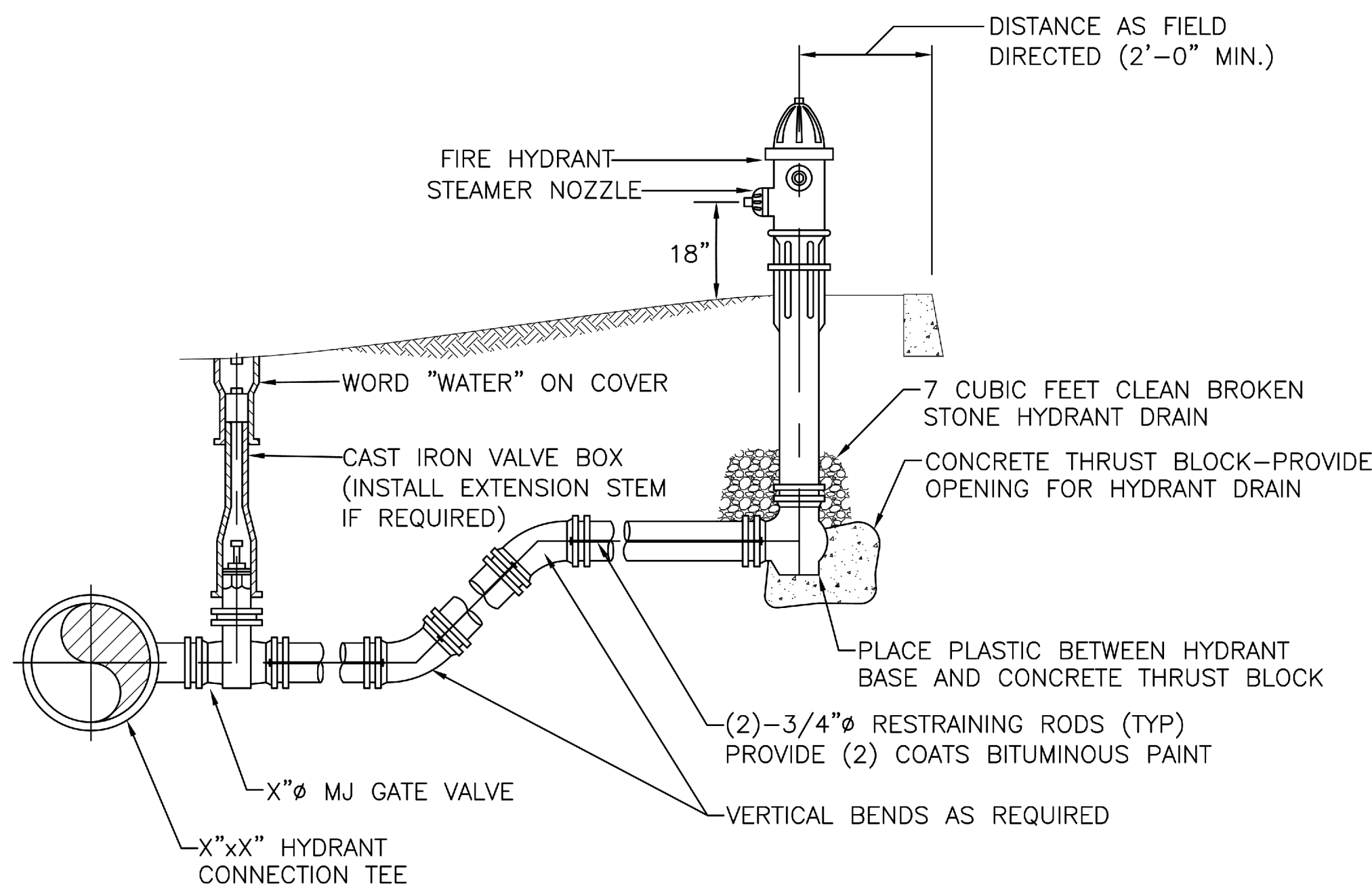


NOTE:
PRESSURE TRANSMITTER PIPE TAPS SHALL BE 1" AND SHALL BE LOCATED AT THE PIPE HORIZONTAL CENTERLINE.

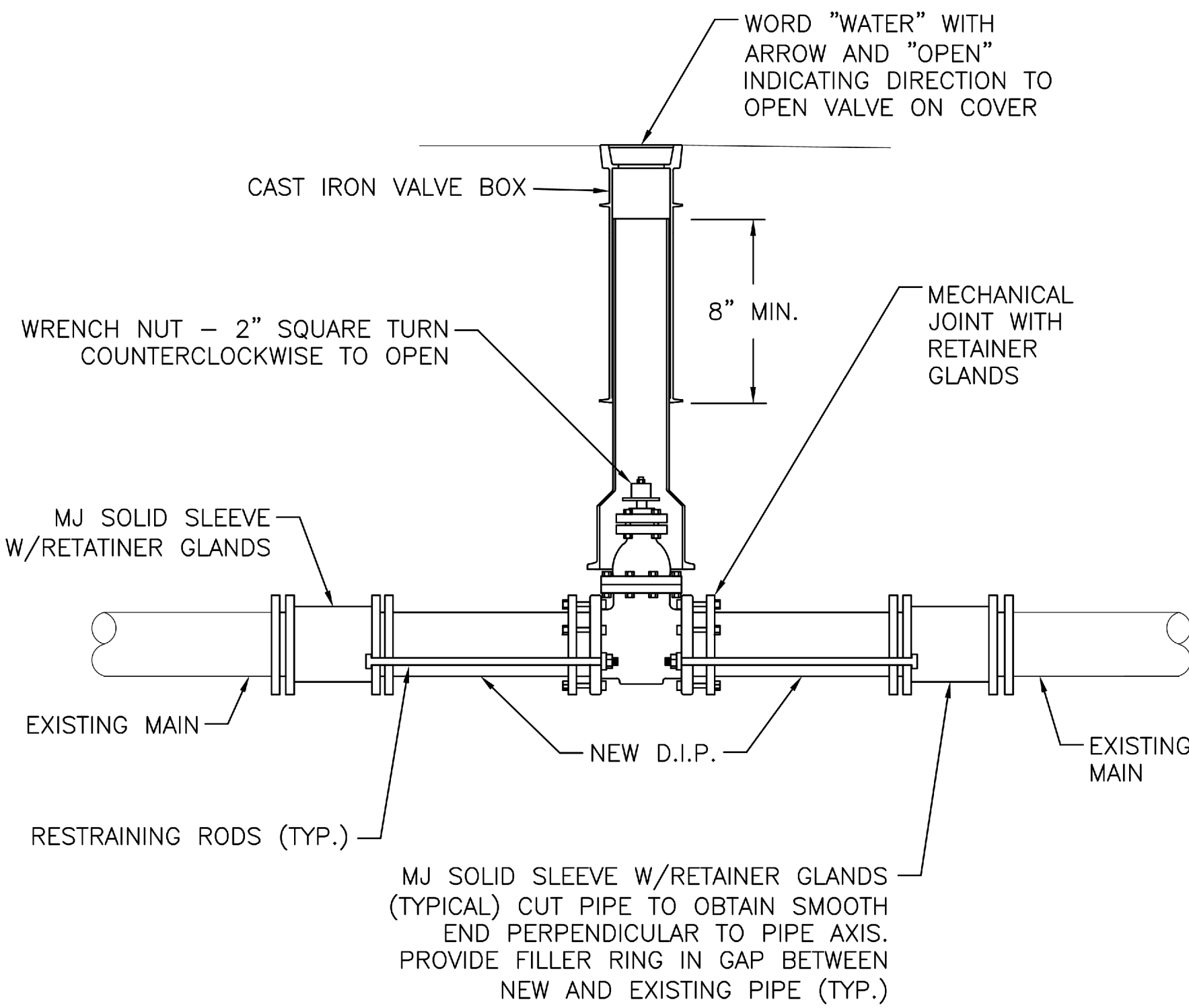
PRESSURE GAUGE, TRANSMITTER
AND SWITCH INSTALLATION DETAIL
NOT TO SCALE



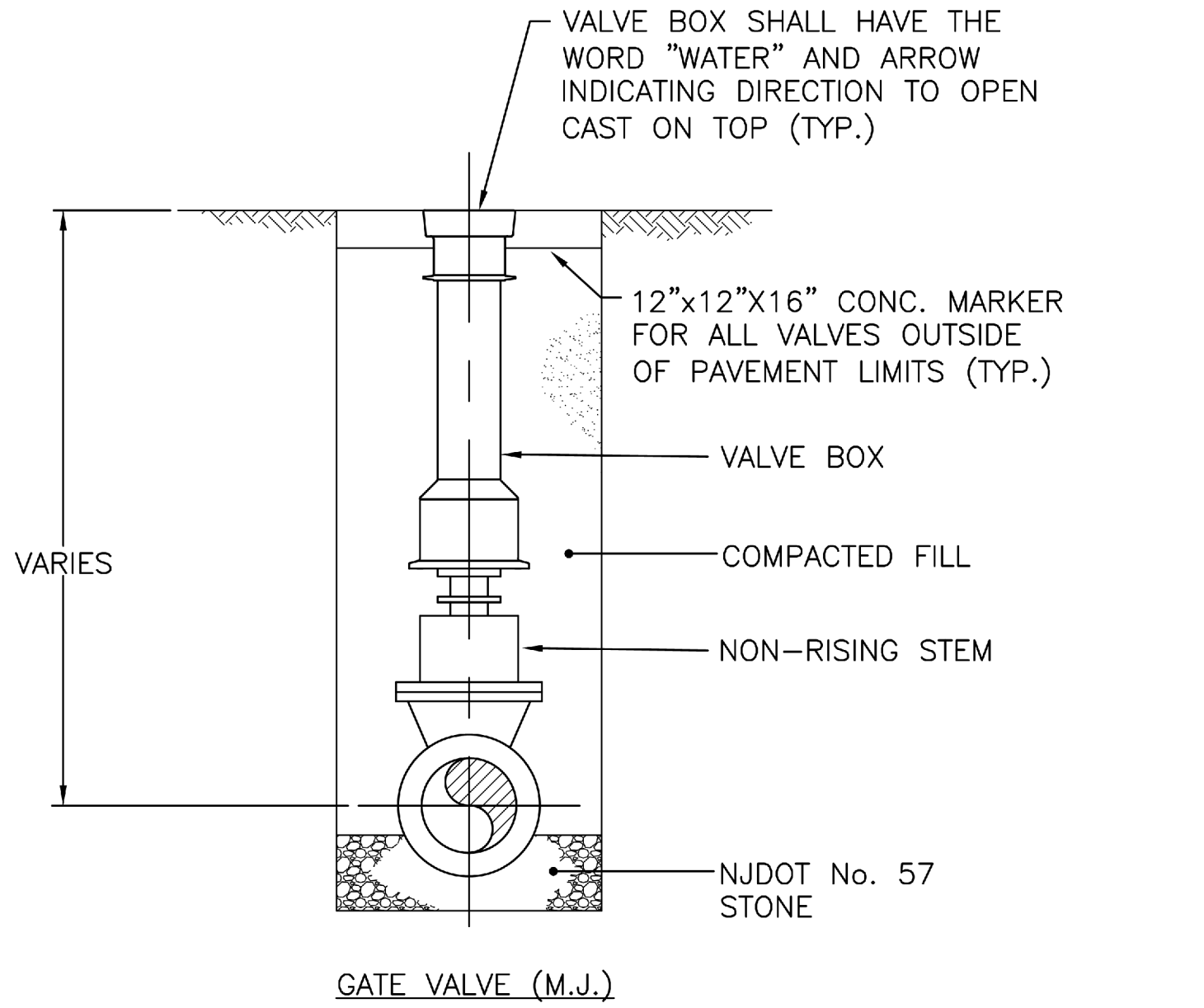
CONCRETE PUMP BASE DETAIL
NOT TO SCALE



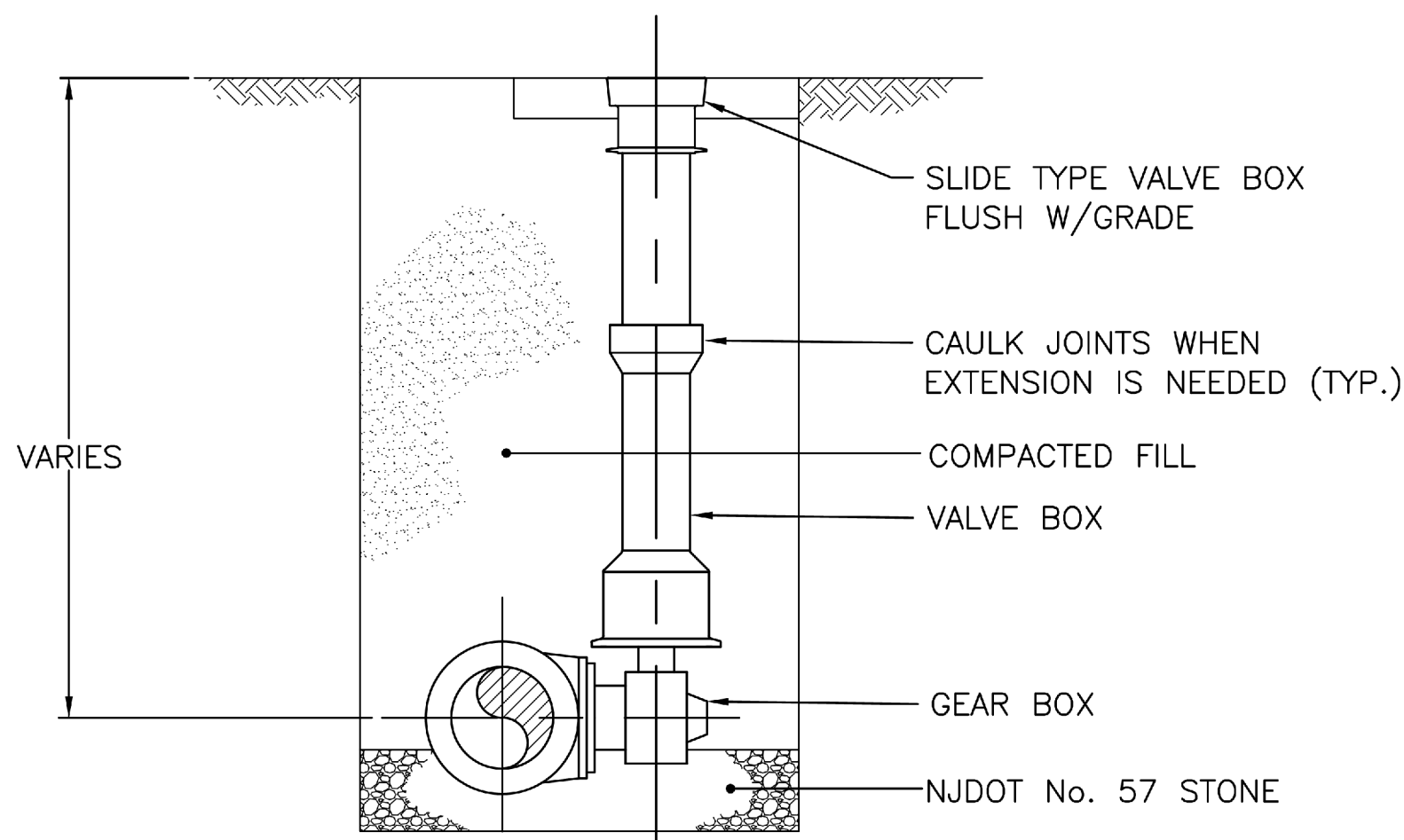
BLOWOFF HYDRANT INSTALLATION DETAIL
(MAIN BEHIND CURB)
NOT TO SCALE



CUT IN GATE VALVE DETAIL
NOT TO SCALE

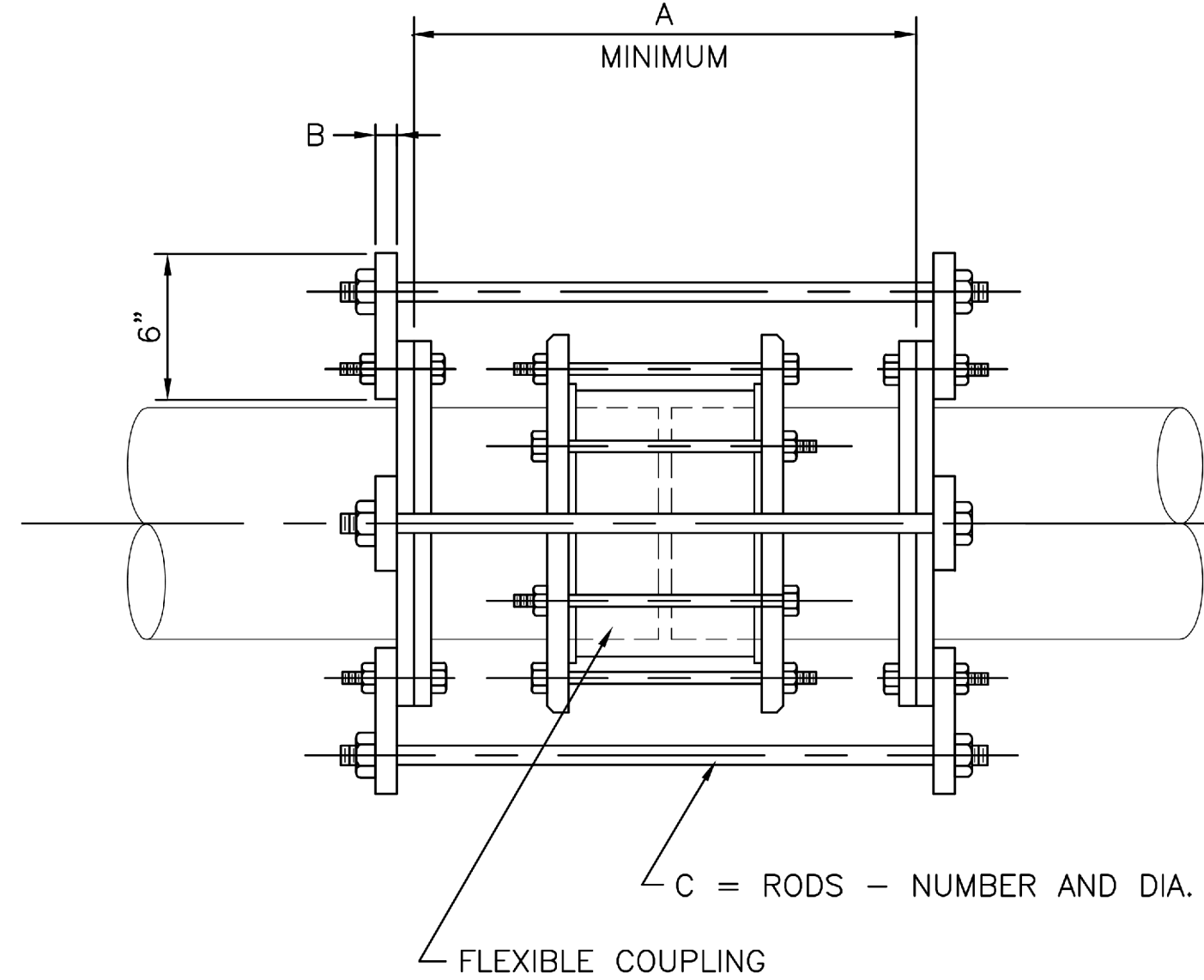


GATE VALVE (M.J.)



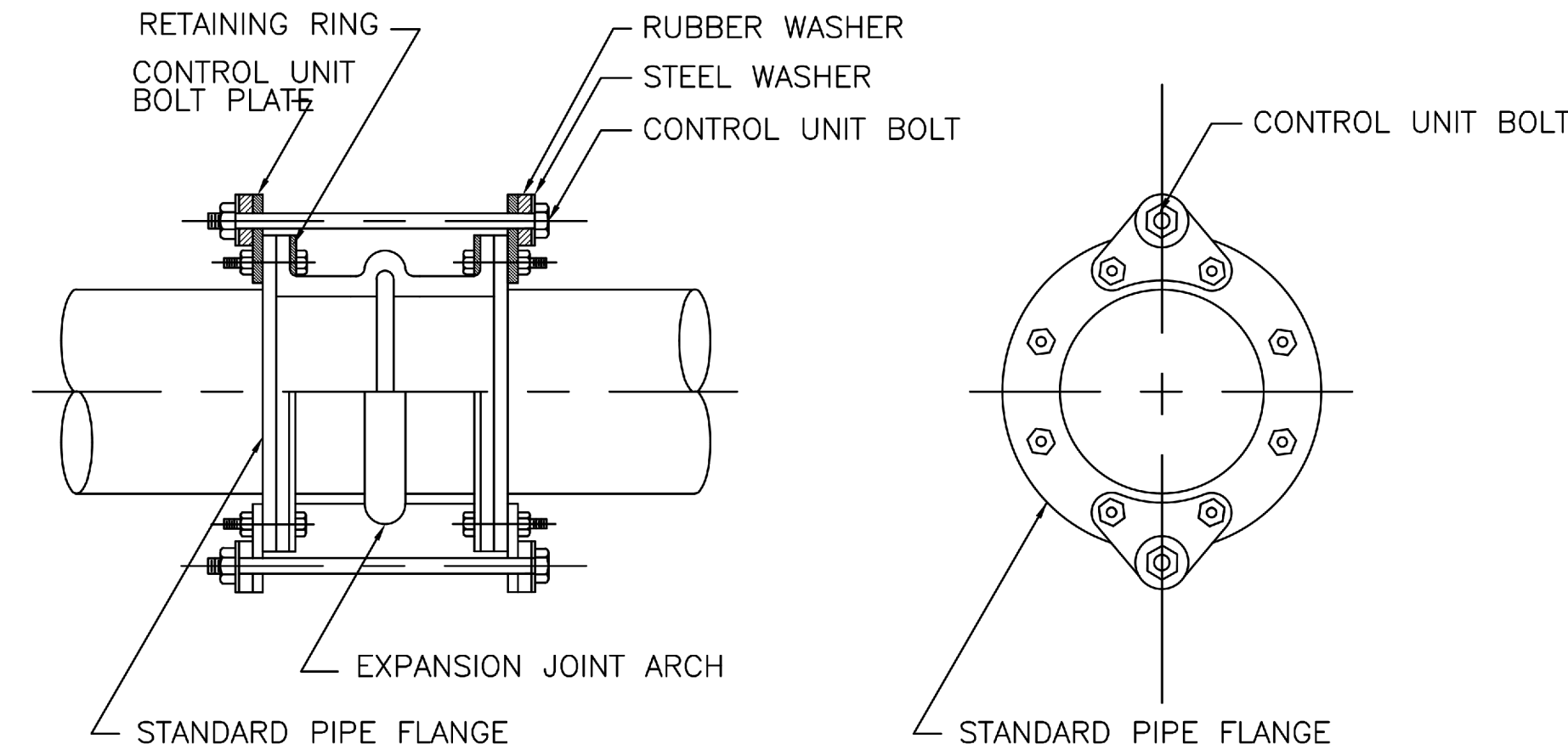
BUTTERFLY VALVE (M.J.)

VALVE INSTALLATION DETAIL
NOT TO SCALE

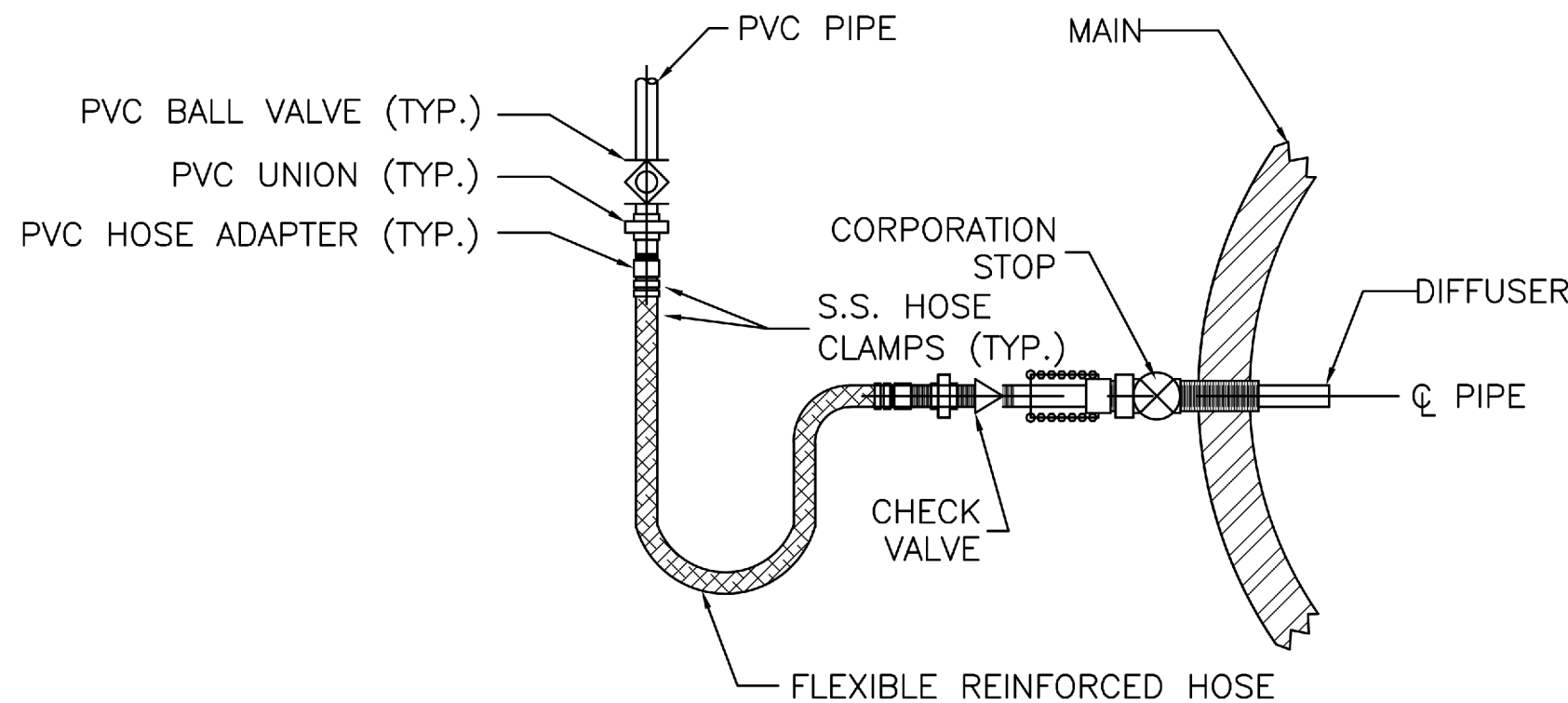


FLEXIBLE COUPLING W/ THRUST PROTECTION
NOT TO SCALE

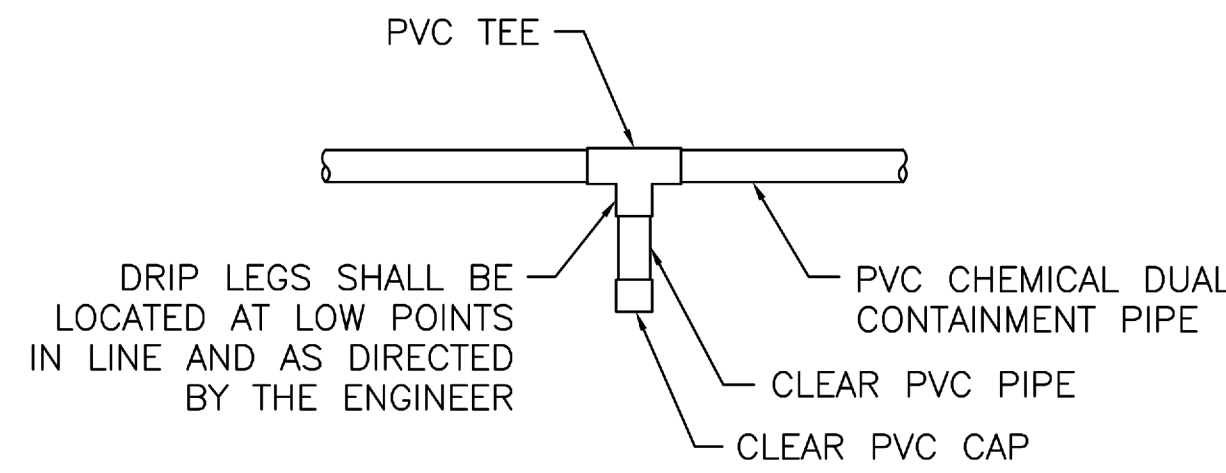
PIPE DIA.	1 1/2"-4"	6"	8"	10"	12"	14"	16"	18"	20"	24"	30"
A	16"	16"	16"	20"	20"	20"	20"	24"	24"	24"	24"
B	3/8"	3/4"	3/4"	7/8"	1"	1"	1"	1 1/4"	1 1/4"	1 1/4"	1 3/8"
C	2-5/8"	2-5/8"	2-3/4"	3-3/4"	4-3/4"	4-3/4"	4-3/4"	4-7/8"	4-7/8"	6-7/8"	8-1"



RUBBER EXPANSION JOINT DETAIL
NOT TO SCALE



RETRACTABLE DIFFUSER DETAIL
NOT TO SCALE



CHEMICAL CONTAINMENT PIPE DRIP LEG DETAIL
NOT TO SCALE

Fully Sprinklered

Additions:	Date:
Revisions:	

DCS Infrastructure, LLC
3249 route 112, building 4 suite 1B
Medford, N.Y. 11763 631-320-1706

Hatch Mott MacDonald

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR
APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL
ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 21333, EXPIRATION DATE: 09/05/16



Approved:	

Approved: Chief, Facilities and Engineering:	
Approved: Associate Chief for Maintenance And Operations, Perry Point:	
Approved: Engineering Projects Supervisor	
Approved: Infection Control Officer	

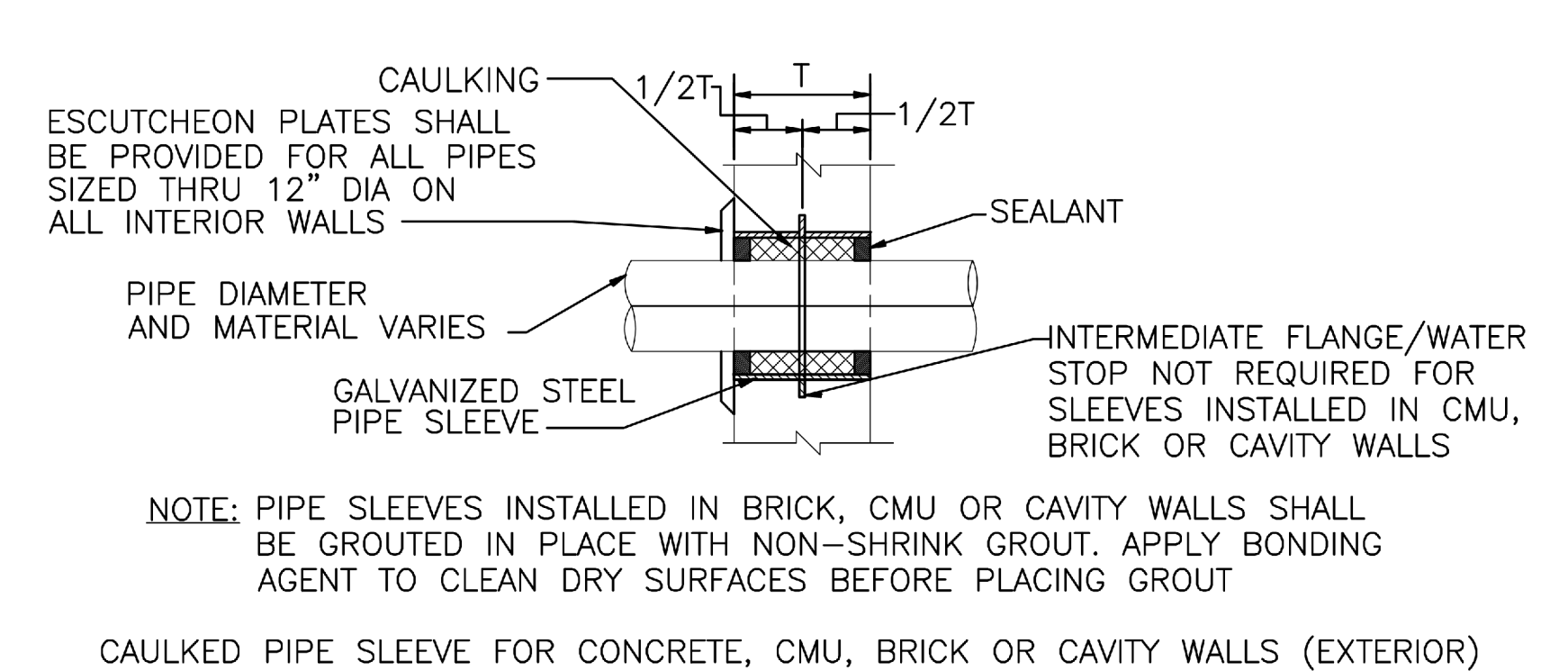
Drawing Title:	DETAILS - SHEET 2 OF 3
Approved: Associate Director for Operations:	
Approved: Director, Medical Center:	

Project Title:	POTABLE WATER SYSTEM IMPROVEMENTS - TIER 1 PERRY POINT MD VAMC
Scale:	NONE
Building No:	103
Checked:	JFC
Drawn:	IER
Location:	VAMC PERRY POINT, MD 21902

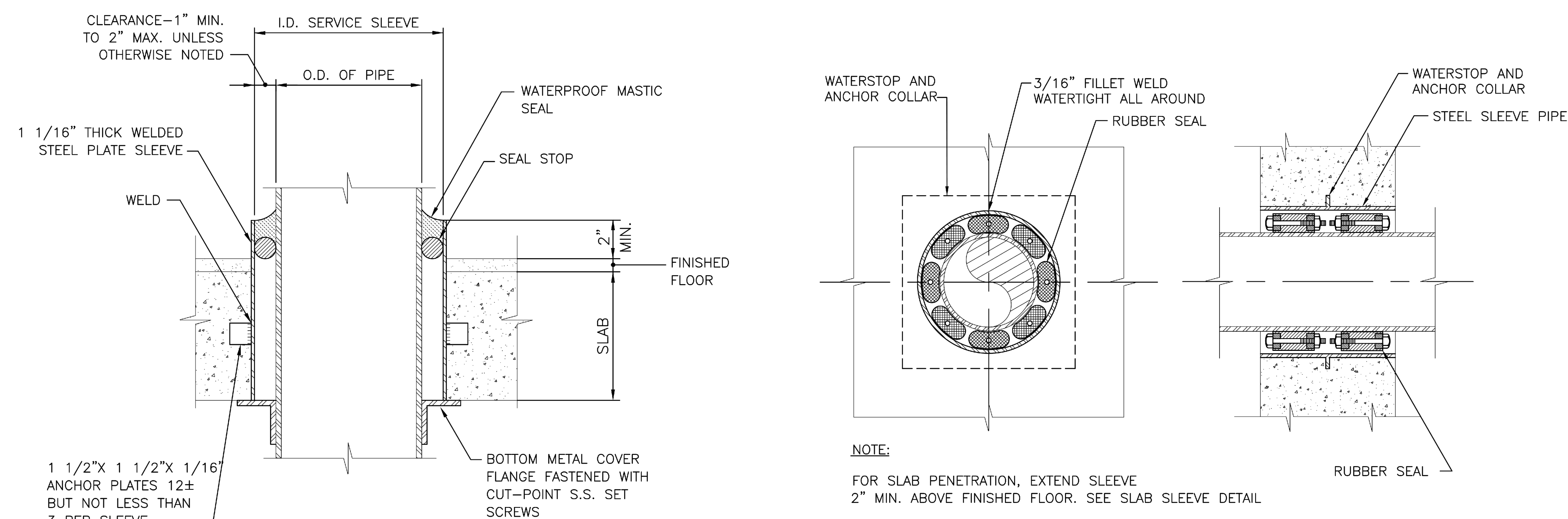
Date:	9/1/2015
Project No:	512A5-10-329
DRAWING NO:	D-013
123 OF 124	

100% Bid Documents, September 1, 2015

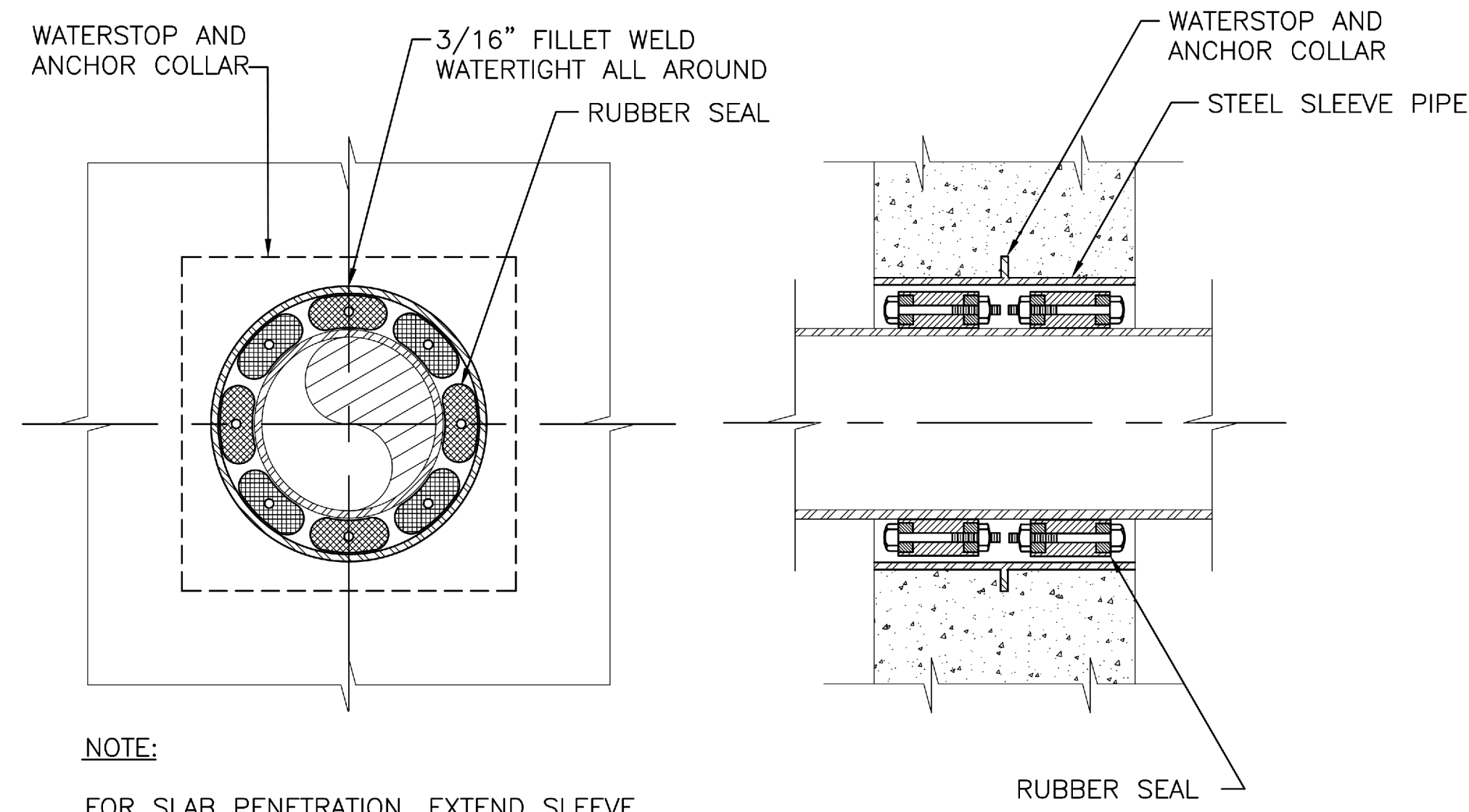




EXTERIOR PIPE PENETRATION DETAIL
NOT TO SCALE



SLAB SLEEVE DETAIL
NOT TO SCALE



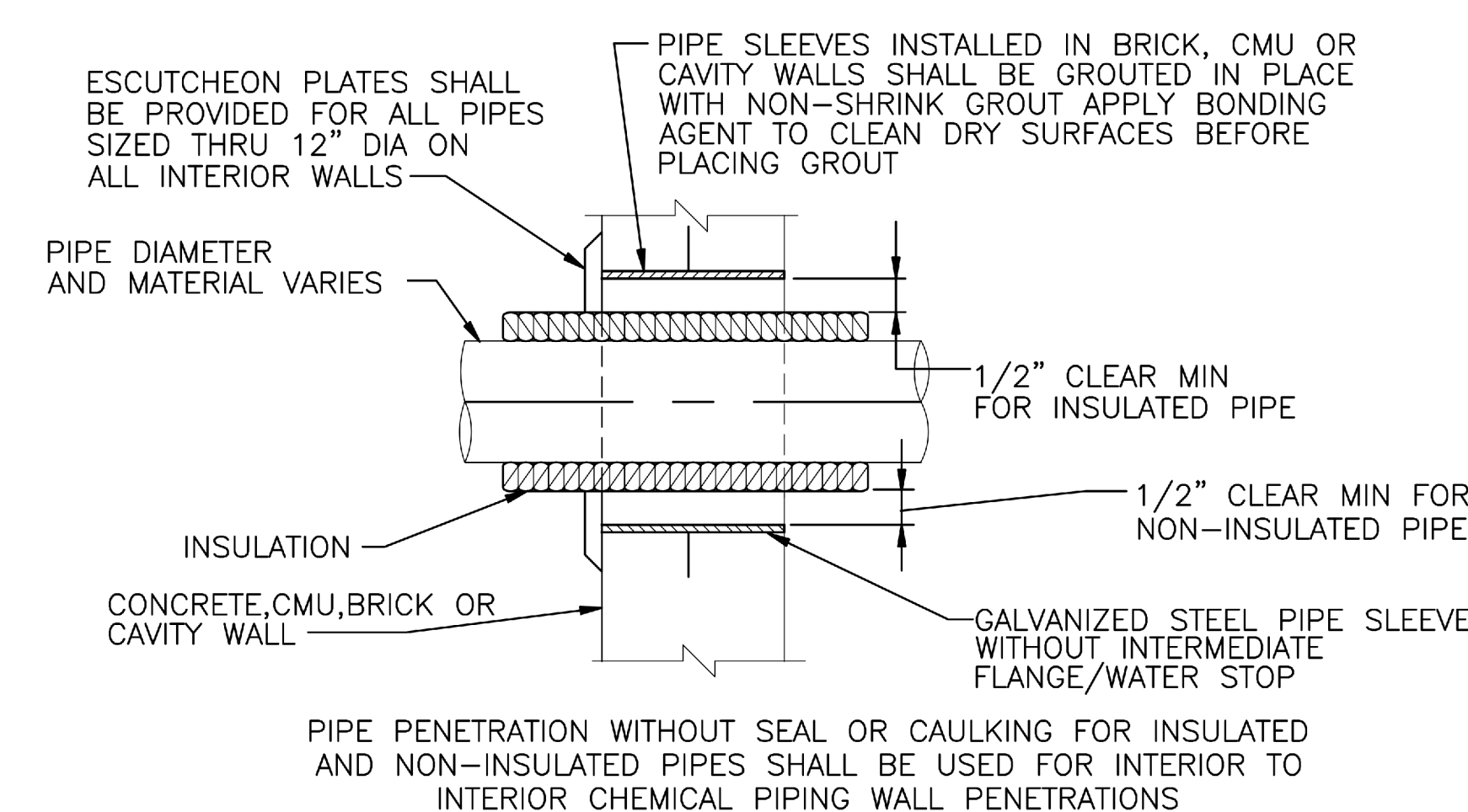
LINK-SEAL WALL/SLAB PENETRATION DETAIL
NOT TO SCALE

ADJUSTABLE PIPE SUPPORT APPROX DIMENSIONS IN INCHES					
PIPE SIZE	A	B	C	D MIN	D MAX
2	2	1	9	8	11
3	2	1	9	8	11
3	2	1	9	8	12
4	3	2	9	10	14
6	3	2	9	11	15
8	3	2	9	13	16
10	3	2	9	14	18
12	3	2	9	15	19
14	4	3	11	18	20
16	4	3	11	19	22

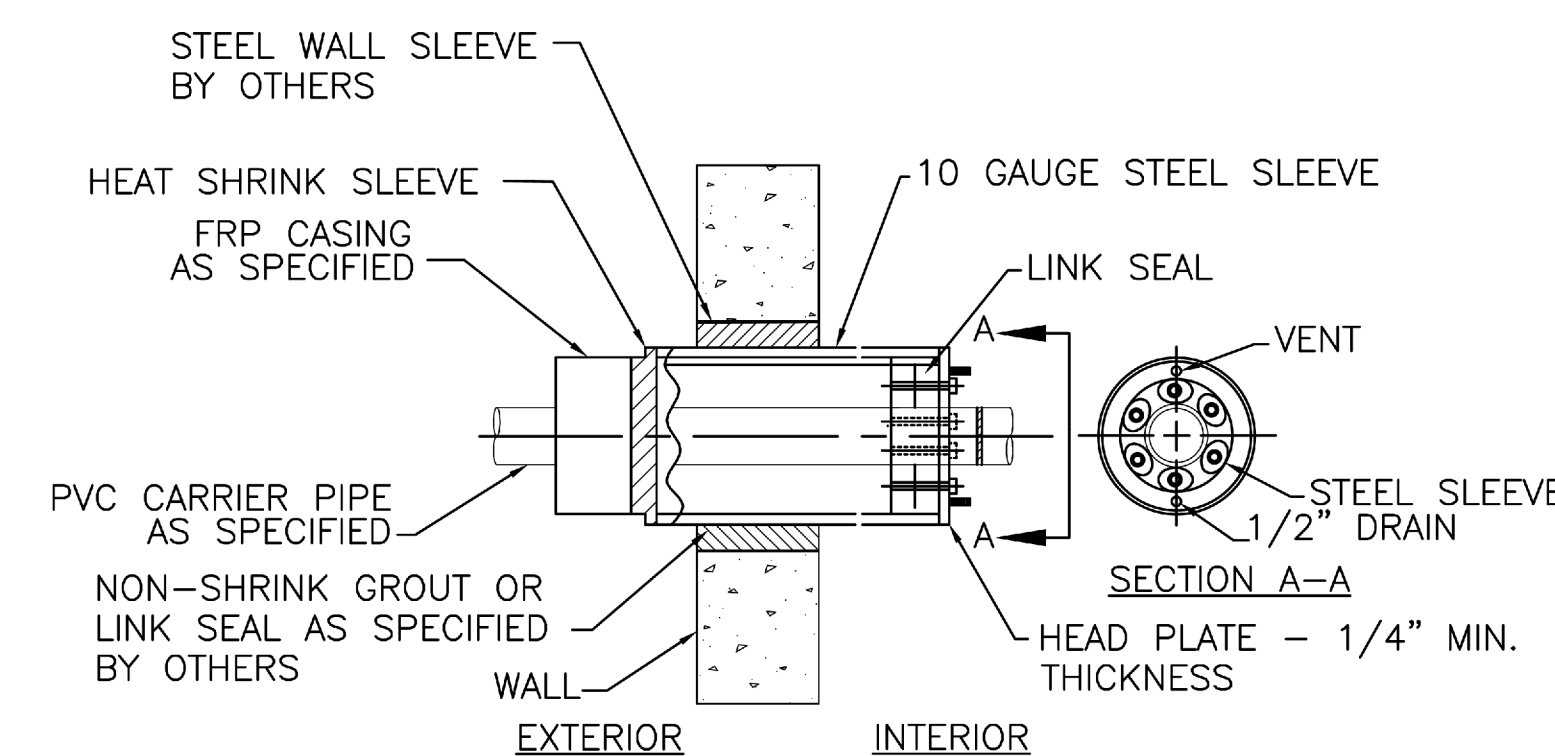
NOTES:

1. UNDER VALVES, METERS OR OTHER SPECIAL APPURTENANCES A FABRICATED SUPPORT PIECE MAY BE UTILIZED AS ACCEPTABLE TO ENGINEER

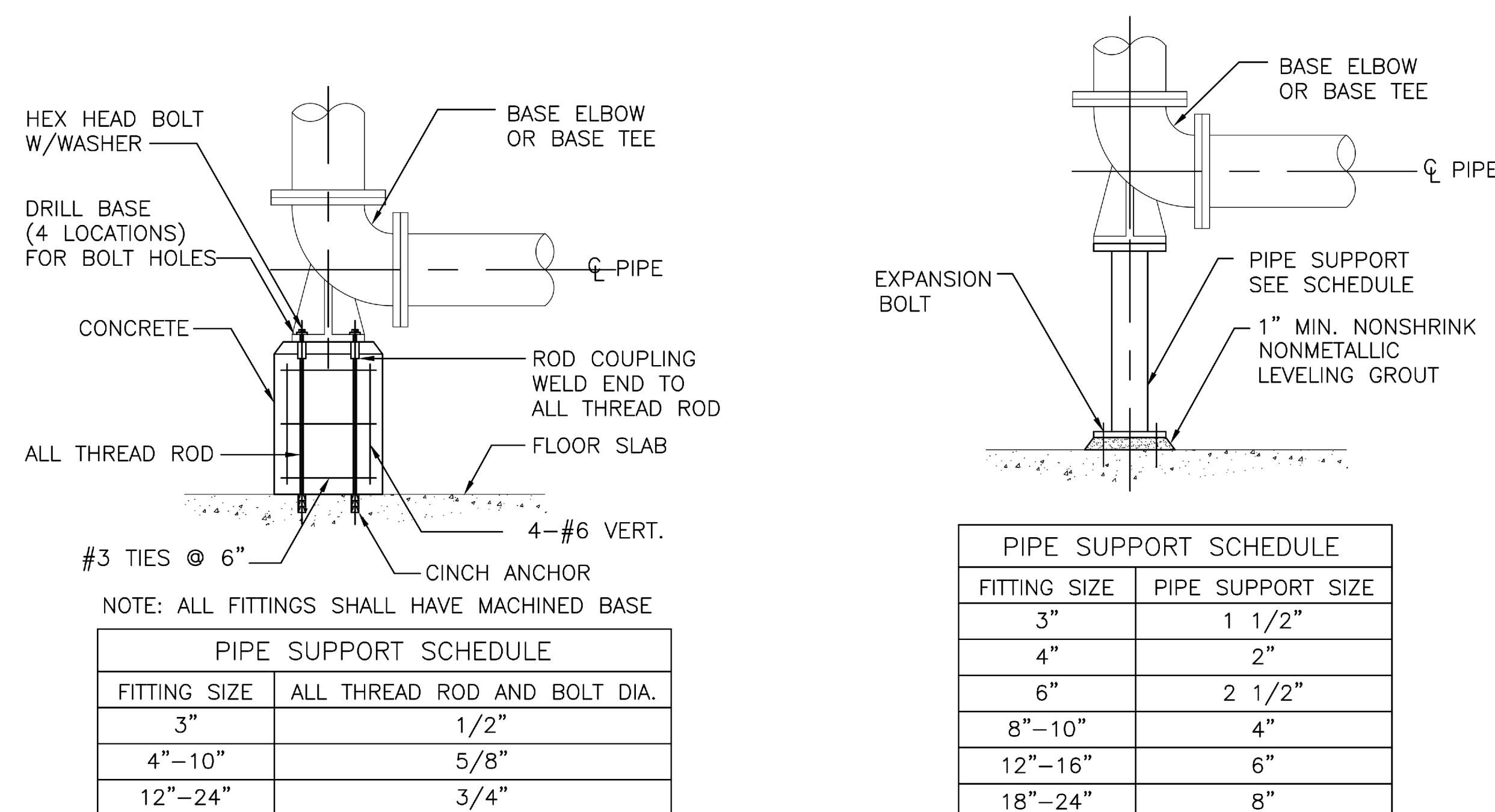
ADJUSTABLE PIPE SUPPORT



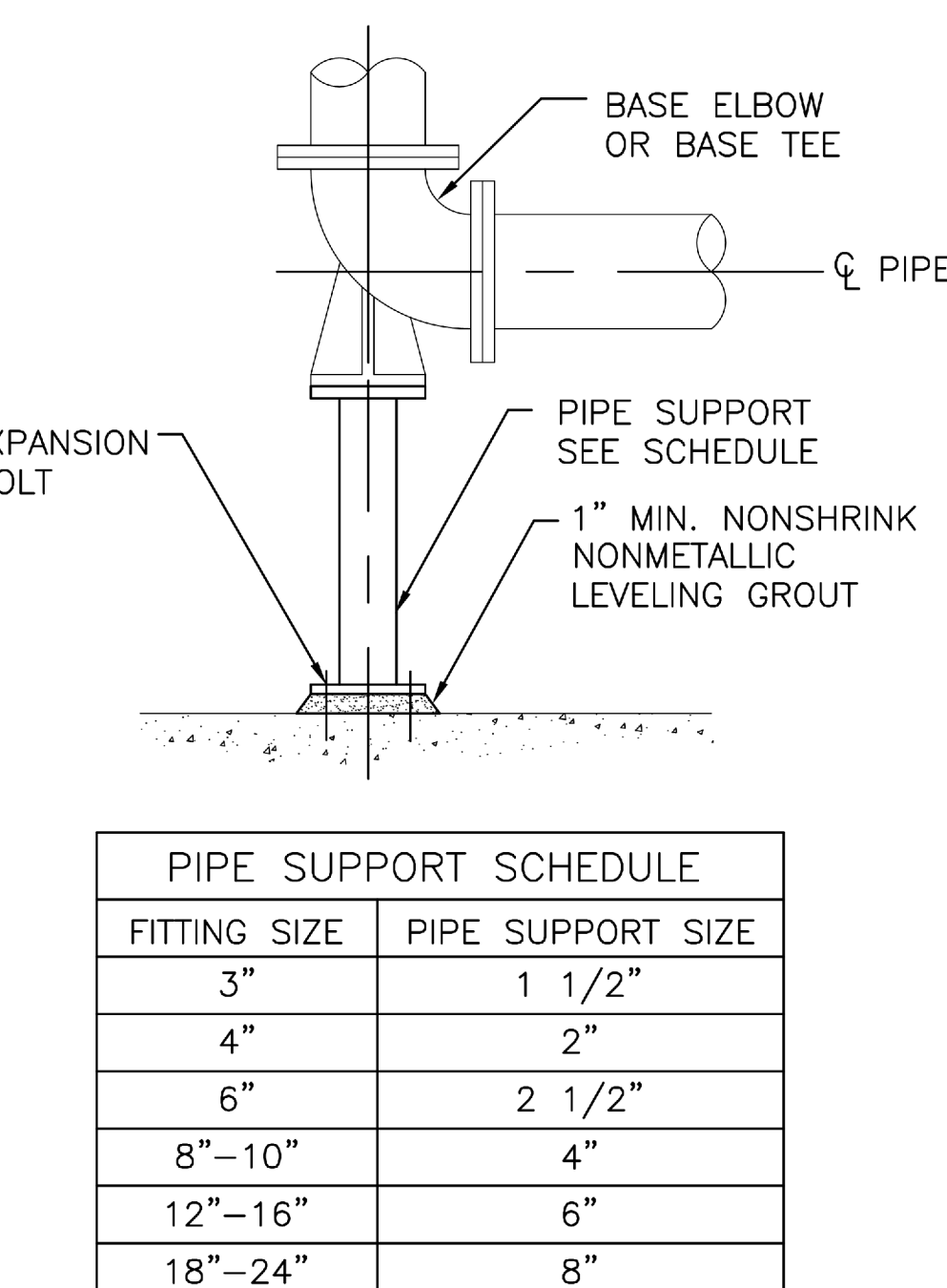
INTERIOR PIPE PENETRATION DETAIL
NOT TO SCALE



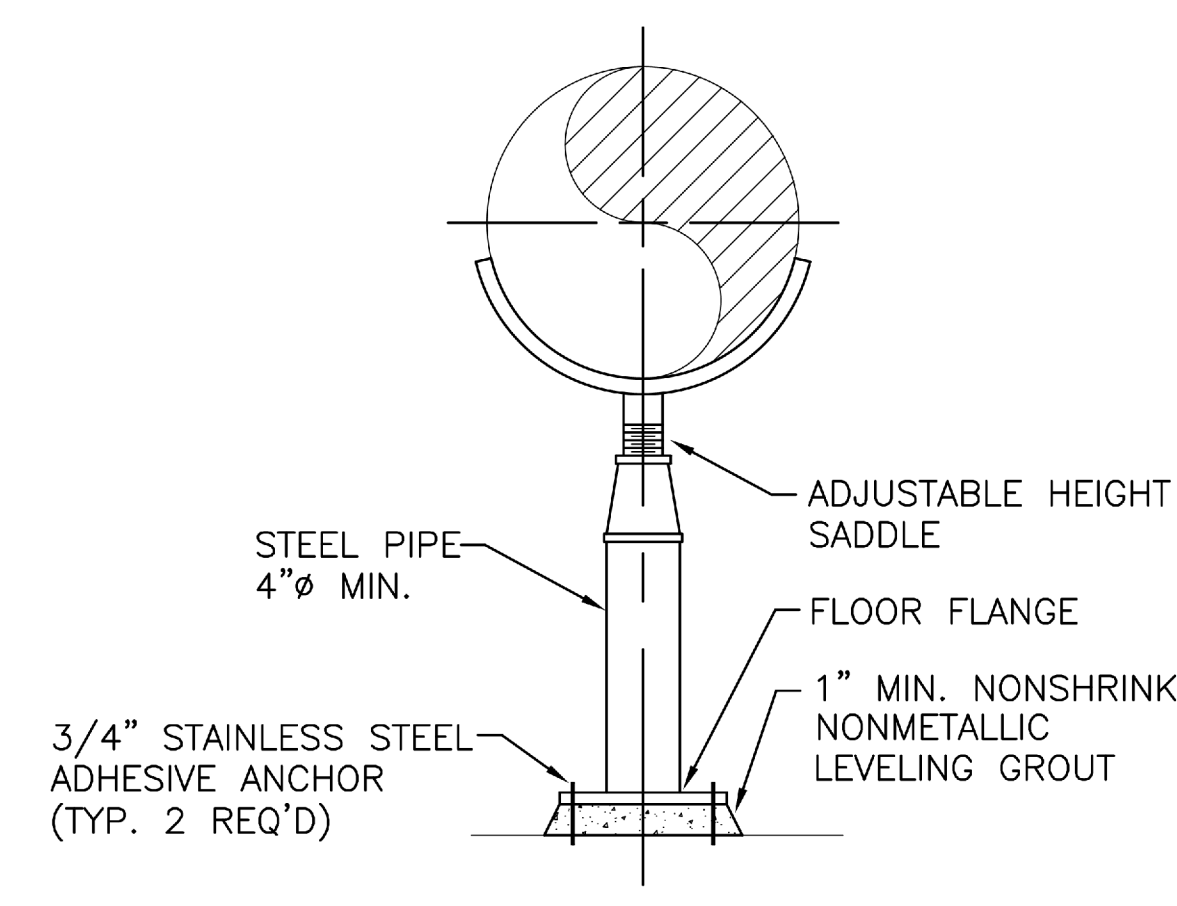
DUAL CONTAINMENT PENETRATION DETAIL
NOT TO SCALE



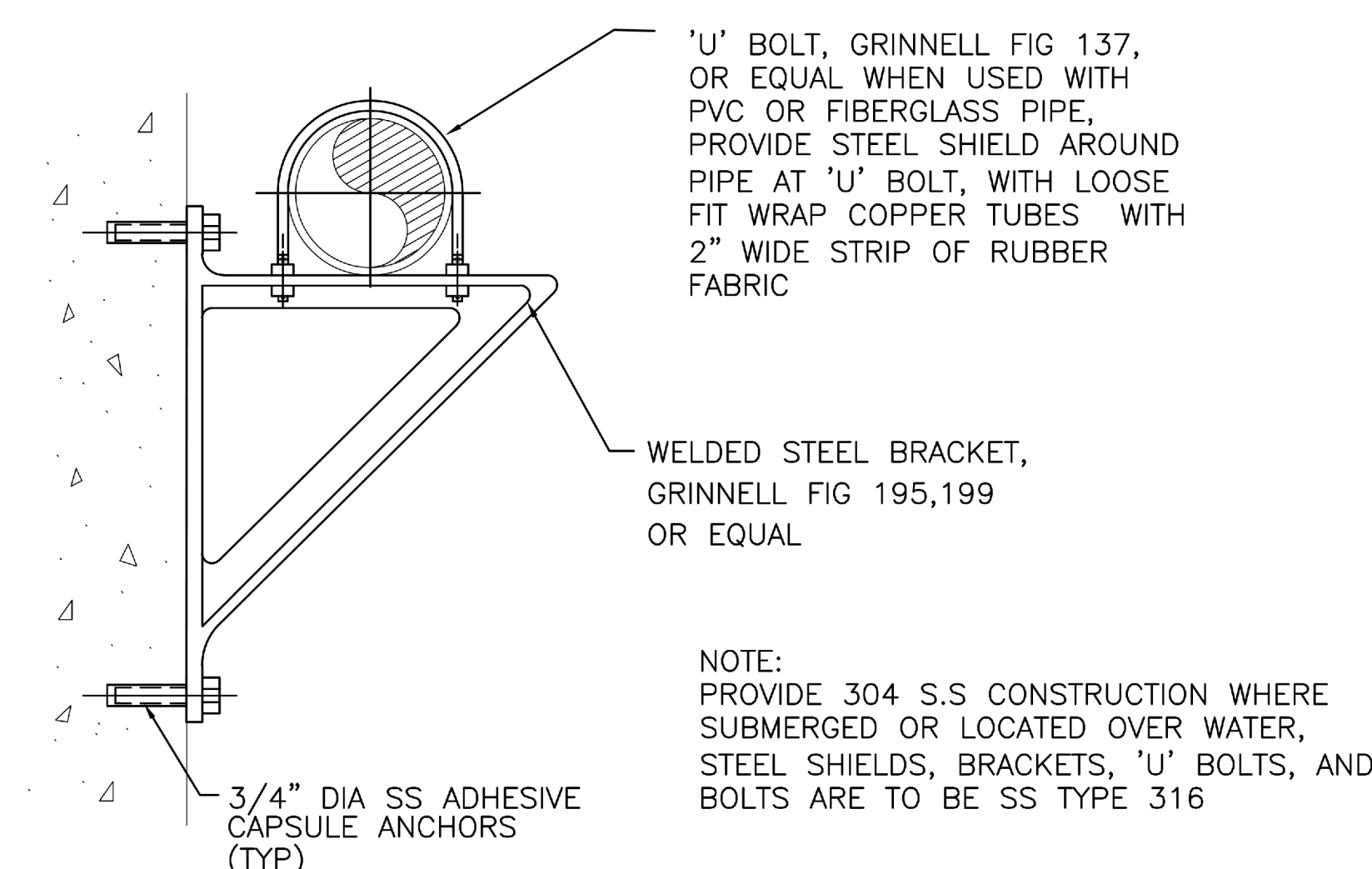
BASE ELBOW AND BASE TEE CONCRETE SUPPORT
NOT TO SCALE



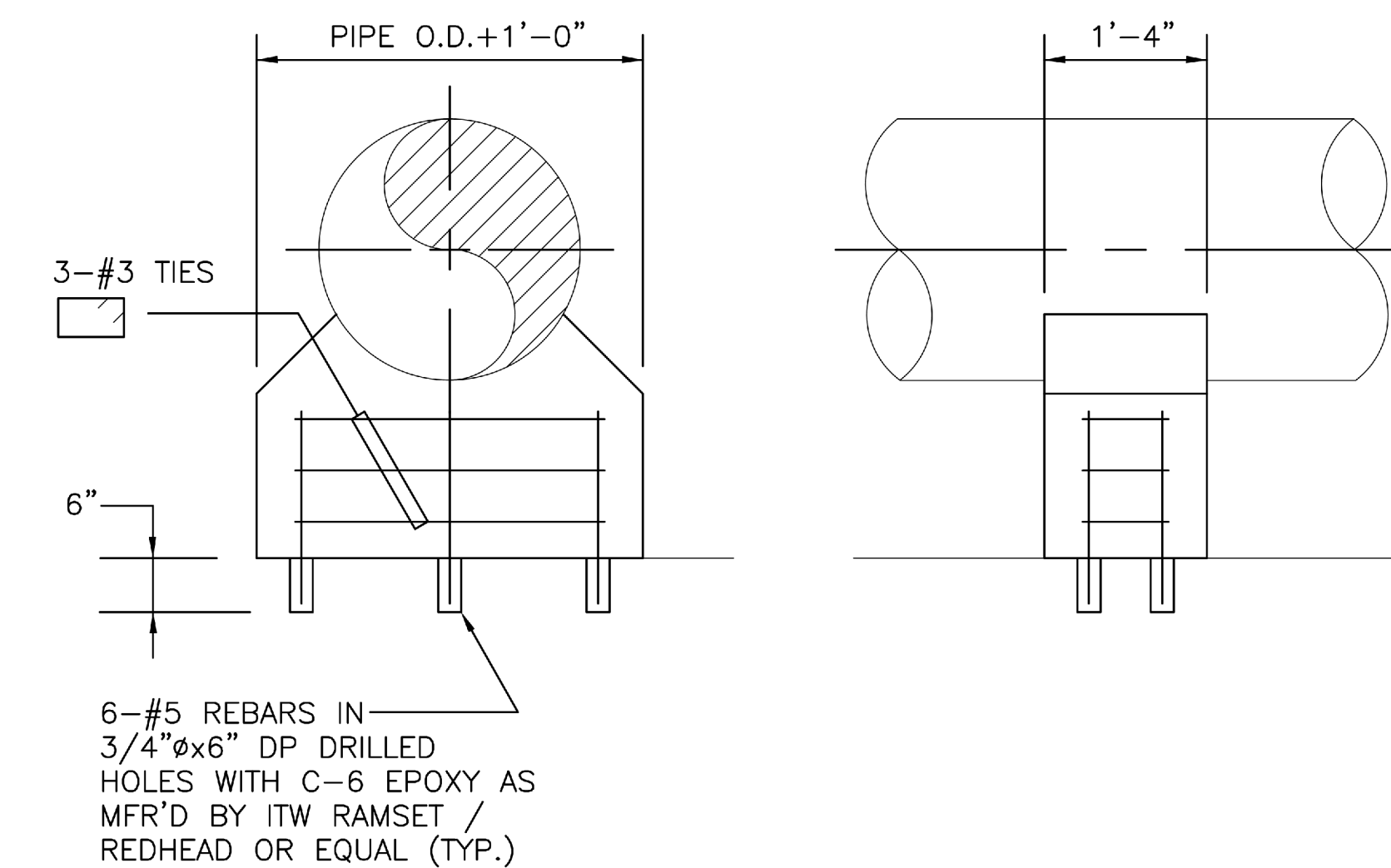
BASE ELBOW AND BASE TEE PIPE SUPPORT
NOT TO SCALE



SADDLE TYPE PIPE SUPPORT DETAIL
NOT TO SCALE



PIPE BRACKET
NOT TO SCALE



CONCRETE PIPE SUPPORT DETAIL
NOT TO SCALE